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Annual Report

OF THE

SCHOOL COMMITTEE

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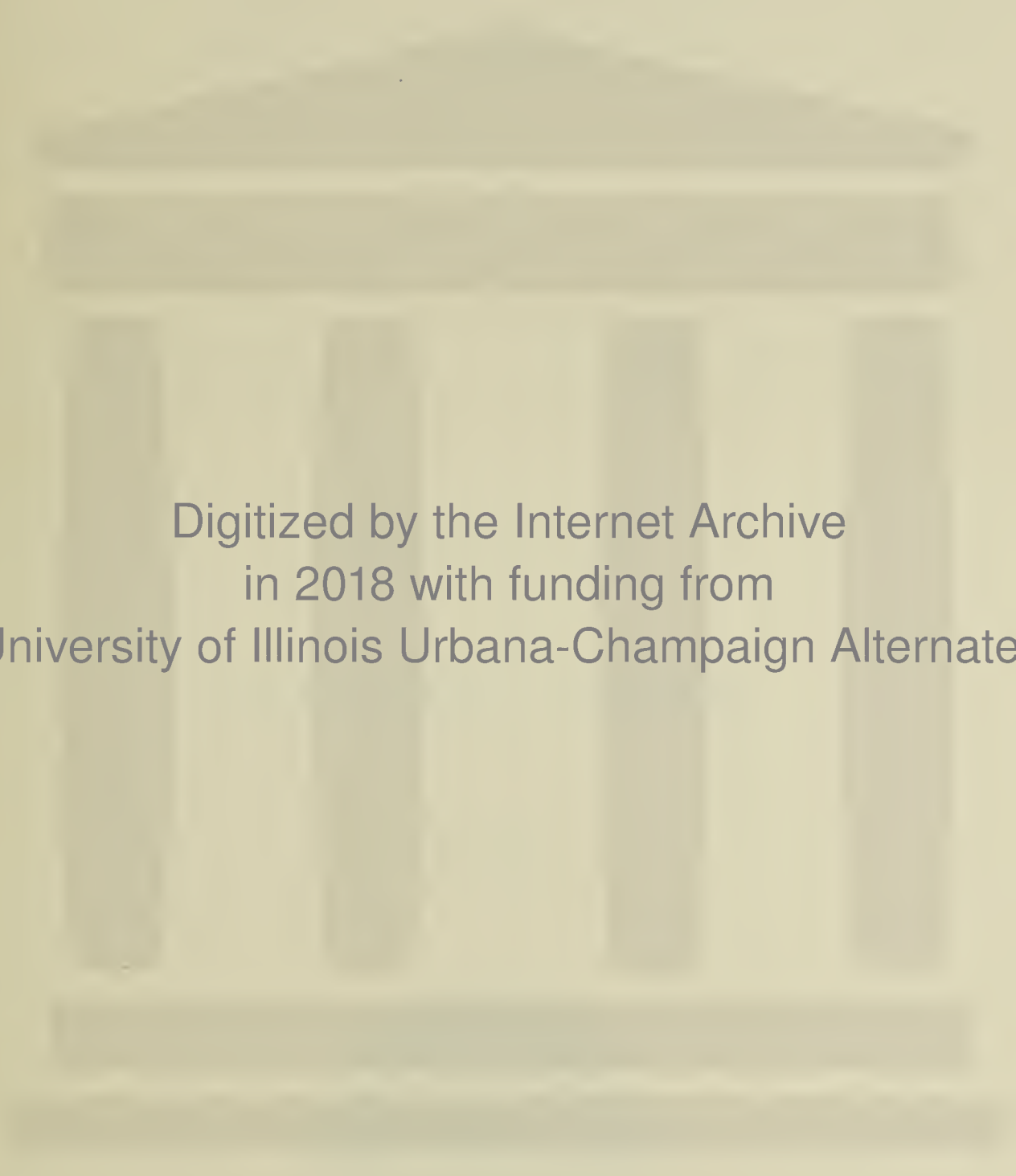
UNIVERSITY OF ILLINOIS



1902

City of Cambridge

MASSACHUSETTS



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City of Cambridge
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ANNUAL REPORT

OF THE

SCHOOL COMMITTEE

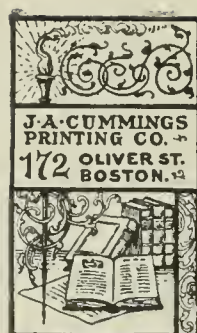
PREPARED BY THE

SUPERINTENDENT OF SCHOOLS

1902



PRINTED FOR THE DEPARTMENT



CONTENTS

	Page.
Statistics	7
Cost of the Schools	14
Finances	15
Tabular View	17
Cost of Instruction	25
Remarks on the Statistics	26
Text-Books and Supplies	26
Changes in Text-Books	29
School Accommodations	29
Plan of the School Report	32
Latin School	32
Course of Study for the Latin School	34
English High School	36
Course of Study for the English High School	38
Rindge Manual Training School	46
Course of Study for the Rindge Manual Training School	47
Manual Training in Other Schools	48
Wellington Training School	49
Grammar Schools	50
Primary Schools	55
Kindergartens	58
Special Studies	61
School Libraries and the Public Library	68
Evening Schools	70
Vacation Schools	73
Truant Officers	74
Contagious Diseases	76
Terms, Holidays, and School Hours	77
Teachers, Appointments, Resignations	78
Qualification of Teachers	80
Salaries of Teachers and School Officers	81
Memory Selections	83
Names of the School Committee for 1902	89
Selections from the Records of the Meetings of the School Committee	90

REPORT OF THE SCHOOL COMMITTEE FOR 1902

In compliance with Section 45 of the Rules of the School Board, the Superintendent herewith submits his twenty-eighth annual report, it being for the year ending December 31, 1902:—

POPULATION OF CAMBRIDGE.

1875	.	.	.	.	.	.	47,838	|	1895	.	.	.	.	.	.	81,643
1885	.	.	.	.	.	.	59,658	|	1900	.	.	.	.	.	.	91,886
1902 (estimated)							.	.	.	.	.	.	.	.	.	94,152

SCHOOL CENSUS.

Number of children in the City five years old or more, but less than fifteen.

1885 (taken in May)	.	.	.	10,957	|	1895 (taken in May)	.	.	.	12,869
1890 (taken in May)	.	.	.	11,971	|	1902 (taken in September)	.	.	.	15,587

SCHOOLS AND CLASS ROOMS.

Latin School	.	.	.	.	1	Class rooms in use	.	.	.	.	14
English High School	.	.	.	.	1	" " "	.	.	.	.	11
Manual Training School	.	.	.	.	1	" " "	.	.	.	.	8
Grammar Schools	.	.	.	.	7	" " "	.	.	.	.	93
Primary Schools	.	.	.	.	19	" " "	.	.	.	.	91
Grammar and Primary Schools	.	.	.	.	9	" " "	.	.	.	.	97
Kindergartens	.	.	.	.	14	" " "	.	.	.	.	14
Evening Drawing Schools	.	.	.	.	2	" " "	.	.	.	.	5
Evening High School	.	.	.	.	1	" " "	.	.	.	.	10
Evening Elementary Schools	.	.	.	.	4	" " "	.	.	.	.	21
Whole number of Day Schools	.	.	.	.	.	.	.	.	.	.	52
Number of class rooms for Day Schools	.	.	.	.	.	.	.	.	.	.	328

NUMBER OF TEACHERS IN THE DAY SCHOOLS.

[Special teachers are included in the total.]

December	Latin School	English High School	Manual Training School	Grammar Schools	Primary Schools	Kindergartens	Total
1898	16	23	Became a public school Jan. 1, 1899	161	133	22	364
1899	19	23		170	138	24	396
1900	22	24		173	142	26	409
1901	22	24		177	143	25	413
1902	24	24		179	140	25	417

ATTENDANCE AT ALL THE DAY SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	15,026	12,907	11,978	92.8
1899	15,753	13,255	12,285	92.6
1900	16,203	13,816	12,684	91.8
1901	16,065	14,144	13,021	92.1
1902	16,341	14,244	13,215	92.8

ATTENDANCE AT THE LATIN SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	398	362	343	94.7
1899	398	371	351	94.8
1900	430	404	385	95.2
1901	490	468	449	96.1
1902	488	465	441	95.1

ATTENDANCE AT THE ENGLISH HIGH SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	773	685	662	96.7
1899	794	688	666	96.7
1900	572	514	491	95.6
1901	613	517	490	94.8
1902	577	498	464	93.1

ATTENDANCE AT THE MANUAL TRAINING SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	212	192	183	95.5
1901	217	191	184	96.2
1902	254	242	229	94.4

ATTENDANCE AT THE GRAMMAR SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	6,570	5,883	5,548	94.3
1899	7,008	6,107	5,738	93.9
1900	7,192	6,295	5,891	93.6
1901	7,044	6,483	6,079	93.8
1902	7,359	6,711	6,316	94.1

ATTENDANCE AT THE PRIMARY SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	6,505	5,429	4,984	91.8
1899	6,750	5,514	5,071	91.9
1900	6,888	5,788	5,267	91.0
1901	6,815	5,840	5,310	90.9
1902	6,687	5,708	5,249	92.0

ATTENDANCE AT THE KINDERGARTENS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1898	780	548	441	80.4
1899	803	575	459	79.9
1900	909	623	467	74.9
1901	886	645	509	78.9
1902	976	620	516	83.2

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE LATIN SCHOOL.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1898	49	14 years 8 months	56	14 years 3 months
1899	58	14 years 5 months	51	14 years 4 months
1900	84	14 years 5 months	70	14 years 5 months
1901	57	14 years 6 months	58	14 years 2 months
1902	60	14 years 5 months	88	14 years 4 months

NUMBER OF PUPILS GRADUATED FROM THE LATIN SCHOOL.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1898	16	18 years 1 month	27	18 years 3 months
1899	16	18 years 3 months	27	18 years 5 months
1900	20	18 years 11 months	19	18 years 11 months
1901	22	18 years 7 months	34	19 years 0 months
1902	23	19 years 1 month	39	18 years 9 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE ENGLISH HIGH SCHOOL.

Year	Boys	Average Age	Girls	Average Age
1898	60	14 years 8 months	169	15 years 1 month
1899	61	15 years 0 months	152	15 years 0 months
1900	56	15 years 5 months	170	15 years 1 month
1901	46	14 years 11 months	145	15 years 0 months
1902	41	14 years 8 months	155	15 years 1 month

NUMBER OF PUPILS GRADUATED FROM THE ENGLISH HIGH SCHOOL.

Year	Boys	Average Age	Girls	Average Age
1898	19	18 years 9 months	64	18 years 5 months
1899	14	18 years 4 months	45	18 years 6 months
1900	23	18 years 2 months	45	18 years 8 months
1901	13	18 years 3 months	47	18 years 9 months
1902	25	18 years 7 months	61	18 years 9 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE MANUAL TRAINING SCHOOL, WITH THE NUMBER OF GRADUATES.

Year	Admitted	Average Age	Graduated	Average Age
1898	70	15 years 5 months	14	18 years 2 months
1899	92	15 years 3 months	13	18 years 6 months
1900	74	15 years 0 months	16	19 years 0 months
1901	110	15 years 2 months	21	18 years 3 months
1902	127	15 years 2 months	23	19 years 2 months

NUMBER OF PUPILS GRADUATED FROM THE GRAMMAR AND PRIMARY SCHOOLS.

Year	Grammar Schools. Course, 6 yrs.	Average Age	Primary Schools. Course, 3 yrs.	Average Age
1898	518	15 years 0 months	1,395	9 years 8 months
1899	553	15 years 0 months	1,393	9 years 8 months
1900	582	14 years 11 months	1,423	9 years 7 months
1901	565	14 years 11 months	1,467	9 years 7 months
1902	643	14 years 11 months	1,460	9 years 6 months

LENGTH OF TIME IN COMPLETING THE COURSE OF STUDY IN THE
GRAMMAR SCHOOLS.

Year	In 4 years	In 5 years	In 6 years	In 7 years or more
1898	6 per cent	29 per cent	47 per cent	18 per cent
1899	6 per cent	31 per cent	47 per cent	16 per cent
1900	6 per cent	28 per cent	50 per cent	16 per cent
1901	6 per cent	28 per cent	50 per cent	16 per cent
1902	7 per cent	27 per cent	51 per cent	15 per cent

LENGTH OF TIME IN COMPLETING THE COURSE OF STUDY IN THE
PRIMARY SCHOOLS.

Year.	In 2 years	In 2½ years	In 3 years	In 3½ years	In 4 years	In 4½ years or more
1898	4 per cent	2 per cent	59 per cent	6 per cent	20 per cent	9 per cent
1899	3 per cent	4 per cent	58 per cent	7 per cent	20 per cent	8 per cent
1900	2 per cent	2 per cent	59 per cent	6 per cent	22 per cent	9 per cent
1901	3 per cent	1 per cent	61 per cent	5 per cent	20 per cent	10 per cent
1902	3 per cent	2 per cent	62 per cent	4 per cent	20 per cent	9 per cent

NUMBER OF PUPILS IN THE LATIN SCHOOL, DECEMBER, 1902.

Grade	Boys	Girls	Total	Per cent
Fourteenth.....	29	33	62	.127
Thirteenth.....	34	31	65	.133
Twelfth.....	56	45	101	.206
Eleventh.....	55	56	111	.227
Tenth.....	59	91	150	.307
Total.....	233	256	489	

NUMBER OF PUPILS IN THE ENGLISH HIGH SCHOOL, DECEMBER, 1902.

Grade	Boys	Girls	Total	Per cent
Thirteenth.....	22	61	83	.153
Twelfth.....	17	90	107	.198
Eleventh.....	33	95	128	.237
Tenth.....	51	147	198	.366
Specials.....	4	21	25	.046
Total.....	127	414	541	

NUMBER OF PUPILS IN THE MANUAL TRAINING SCHOOL, DECEMBER, 1902.

Grade	Boys		Per cent
Thirteenth.....	48	This school is for boys only. It became a part of the public school system, January 1, 1899.	.177
Twelfth.....	42		.154
Eleventh.....	66		.243
Tenth.....	116		.426
Total.....	272		

NUMBER OF PUPILS IN THE GRAMMAR SCHOOLS, DECEMBER, 1902.

Grade	Boys	Girls	Total	Per cent
Ninth.....	261	334	595	.086
D.....	50	60	110	.016
Eighth.....	363	469	832	.121
C.....	89	72	161	.023
Seventh.....	442	531	973	.141
Sixth.....	526	594	1,120	.163
B.....	96	130	226	.033
Fifth.....	617	606	1,223	.177
A.....	155	195	350	.050
Fourth.....	671	637	1,308	.190
Total.....	3,270	3,628	6,898	

NUMBER OF PUPILS IN THE PRIMARY SCHOOLS, DECEMBER, 1902.

Grade	Boys	Girls	Total	Per cent
Third.....	794	847	1,641	.282
Second.....	904	874	1,778	.305
First.....	1,300	1,106	2,406	.413
Total.....	2,998	2,827	5,825	

NUMBER OF PUPILS AND TEACHERS IN THE KINDERGARTENS.

Year	Boys	Girls	Total	Number of Teachers
1900	337	356	693	26
1901	355	351	706	25
1902	358	364	722	25

NUMBER OF PUPILS BELONGING TO THE EVENING DRAWING SCHOOLS, WITH THE
AVERAGE ATTENDANCE.

1897	1898	1899	1900	1901	1902
209	182	194	184	193	220
114	99	99	99	97	114

NUMBER OF PUPILS BELONGING TO THE EVENING SCHOOLS, WITH THE AVERAGE
ATTENDANCE.

1897	1898	1899	1900	1901	1902
1,225	1,165	1,158	1,248	1,286	1,367
448	494	452	420	464	510

NUMBER OF PUPILS IN THE PRIVATE SCHOOLS IN CAMBRIDGE, INCLUDING THOSE
IN THE PAROCHIAL SCHOOLS.

1897	1898	1899	1900	1901	1902
2,512	2,637	2,713	3,004	3,439	3,451

NUMBER OF AGE AND SCHOOLING CERTIFICATES ISSUED.

1897	1898	1899	1900	1901	1902
229	291	324	380	387	507 *354

* Issued to minors over sixteen years of age, in accordance with the law of 1902.

COST OF INSTRUCTION IN THE DAY SCHOOLS.

[Salaries of teachers, superintendent, supervisor, agent, clerks and truant officers.]

Year	Number of Teachers in December	Average Number of Pupils	Whole Cost	Cost per Pupil
1876	176	7,066	\$164,818 00	\$23 32
1878	173	7,028	136,491 20	19 42
1880	182	7,175	130,371 75	18 17
1882	200	7,898	137,328 55	17 38
1884	216	8,414	152,290 62	18 09
1886	233	9,218	165,277 42	17 92
1888	241	9,756	175,773 80	18 02
1890	263	10,089	190,558 21	18 89
1892	284	10,861	207,144 22	19 07
1894	312	11,166	228,873 48	20 50
1896	337	11,957	245,104 01	20 50
1898	364	12,907	268,182 97	20 78
1900	409	13,816	326,512 34	23 63
1901	413	14,144	336,149 80	23 77
1902	417	14,244	343,787 00	24 14

COST OF THE DAY SCHOOLS.

[This includes the cost of instruction, of text-books and supplies, of incidental expenses, of the care of truant, of the care and repair of schoolhouses, and of the transportation of pupils.]

Year	Number of Teachers in December	Average Number of Pupils	Whole Cost	Cost per Pupil
1876	176	7,066	\$200,894 09	\$28 43
1878	173	7,028	162,437 77	23 11
1880	182	7,175	153,967 56	21 45
1882	200	7,898	166,230 52	21 04
1884	216	8,414	203,234 56	24 15
1886	233	9,218	207,536 46	22 51
1888	241	9,756	225,408 57	23 10
1890	263	10,089	241,980 84	23 98
1892	284	10,861	266,651 02	24 55
1894	312	11,166	287,137 37	25 72
1896	337	11,957	316,090 83	26 44
1898	364	12,907	345,566 30	26 77
1900	409	13,816	417,554 00	30 22
1901	413	14,144	429,208 22	30 35
1902	417	14,244	427,356 71	30 00

COST OF INSTRUCTION IN THE EVENING SCHOOLS.

Year	Elementary	High	Drawing	Total
1897	\$2,086 00	\$1,274 50	\$1,060 00	\$4,420 50
1898	2,324 00	1,439 00	1,091 00	4,854 00
1899	2,570 00	1,499 00	1,206 00	5,275 00
1900	3,375 00	1,874 00	1,430 00	6,679 00
1901	2,777 50	1,551 75	1,205 00	5,534 25
1902	3,218 50	1,682 75	1,298 00	6,199 25

FINANCES.

(For the financial year ending December 1, 1902.)

Cost of instruction in day schools	\$343,787 00
Cost of instruction in evening schools	6,199 25
Cost of care and repair, day schools	60,993 58
Cost of care, evening schools	1,963 20
Cost of text-books and supplies, day schools	18,775 53
Cost of text-books and supplies, evening schools	445 41
Expended for incidentals	1,554 35
Expended for care of truants	1,847 10
Expended for flags	99 15
Expended for transportation of pupils	300 00
Expended for vacation schools	1,016 97
Expended for land for schoolhouse, Elm street	11,257 75
Expended on new schoolhouse, Ward VIII.	3,275 59
Expended on new schoolhouse, Ward III	18,958 66
Expended for furniture for new schoolhouse, Ward VIII.	569 50
Expended on different buildings on account of the fire at the Allston school, December 12. 1901	1,600 69
	\$472,643 73
Deducting from the above the amount received from the Hopkins Fund, \$621.56, the tuition of State wards, \$691.00, the tuition of non-resident pupils, \$6,718.25	8,030 81
The actual cost of the schools to the city is	\$464,612 92
Assessed value of real and personal estates, May, 1902, ...	98,139,885 00
Ratio of expenditure for school purposes to the valuation of 1902	.0047

STATISTICS TAKEN FROM THE FIFTY-SIXTH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF EDUCATION.

Number of towns and cities: towns, 320; cities, 33	353
Number of public schools based on the single class room as the unit of comparison	11,017
Number of pupils between seven and fourteen years of age attending the public schools during the year 1901-1902	299,065
Number of different pupils between five and fifteen years of age attending the public schools during the year 1901-1902	420,308
Number of pupils under five years of age attending the public schools during the year 1901-1902	11,273
Number of pupils over fifteen years of age attending the public schools during the year 1901-1902	42,653
Number of pupils of all ages in the public schools during the year 1901-1902	474,234
Average membership of pupils in all the public schools during the year 1901-1902	415,533
Average attendance in all the public schools during the year 1901-1902	380,026
Percentage of attendance based on the average membership	92

Number of persons employed as teachers in the public schools during the year: men, 1,240; women, 12,665	13,905
Number of teachers who have graduated from normal schools . . .	5,451
Average number of months the public schools have been kept for the entire year	9 mos., 6 days
Number of high schools	260
Number of teachers in high schools	1,592
Number of pupils in high schools	40,252
Total expenditure for the support of the public schools	\$11,690,070 05
Total expenditure for new schoolhouses, permanent improvements, and ordinary repairs	3,442,063 33
Entire expenditure	<u>\$15,132,133 38</u>

TABULAR VIEW.

DECEMBER 31, 1902.

Prepared by the Secretary of the School Committee.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Latin.....	William F. Bradbury.....	\$3,000	489
	Theodore P. Adams.....	2,000	
	John I. Phinney.....	2,000	
	Max Benshimol	1,400	
	Helen M. Albee	950	
	Constance Alexander.....	950	
	Mabel V. Arnold	700	
	Mary A. Bachelder	950	
	Alice C. Baldwin.....	950	
	Almira W. Bates	600	
	Margaret S. Bradbury.....	600	
	Isabel S. Burton.....	950	
	Alice D. Chamberlain.....	700	
	Etta L. Davis.....	750	
	Grace C. Davenport.....	500	
	Caroline Drew	950	
	Mary C. Hardy*.....	950	
	Rose Hardwick.....	950	
	Mabel E. Harris	950	
	Helen W. Munroe.....	950	
	Louisa P. Parker.....	950	
	Lena G. Perrigo.....	950	
	Lucile C. Reynolds	750	
	Ethel V. Sampson.....	750	
	Jennie S. Spring.....	950	
	Annie S. Dodge†	600	
English High.....	Ray Greene Huling	3,000	541
	Edwin L. Sargent.....	2,000	
	Joseph A. Coolidge.....	1,600	
	Russell T. Greene, Jr.....	1,500	
	Francis L. Bain.....	850	
	Grace L. Deering.....	1,200	
	Caroline Close.....	950	
	Bertha L. Cogswell.....	950	
	Gertrude H. Crook	950	
	Mary L. Cunningham.....	700	
	Esther S. Dodge	950	
	Katherine H. James	700	
	Jeannie B. Kenrick.....	750	
	Maud A. Lawson.....	950	
	Henrietta E. McIntire	950	
	Mary Moulton	950	
	Lillian C. Rogers.....	950	
	Caroline A. Sawyer.....	950	
	Emma A. Scudder.....	950	
	Florence W. Smith.....	950	
	Martha R. Smith.....	950	

* On leave of absence for study or travel in accordance with Rule 70.

† Secretary and Librarian.

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
English High	Delia M. Stickney..... Annie F. Stratton..... Mabel D. Watson..... Martha L. Babbitt*.....	\$1,200 750 700 600	272
Manual Training	Charles H. Morse..... Myra I. Ellis..... Helen W. Metcalf..... Richard H. Gallagher..... Lewis D. Hill..... John M. Hussey..... James E. MacWhinnie..... Joseph M. Norton..... Harry E. Rich..... Walter M. Smith..... Wilbur B. Sprague..... James G. Telfer..... Frederick W. Turner..... Albert L. Ware..... John W. Wood, Jr..... John J. McKenzie*.....	3,000 1,300 950 1,000 1,300 1,200 1,100 1,100 700 1,050 1,000 1,500 1,500 1,200 1,400 500	
Agassiz	{ Grammar	Maria L. Baldwin.....	{ 157
	{ Primary	Edith C. Arey.....	{ 129
		Addie B. Byam.....	
		Frances W. Dawson.....	
		Lillian G. Goodwin.....	
		Mary A. Parsons.....	
		Grace C. Stedman.....	
		Jennie L. Upham.....	
Allston	{ Grammar	Everett L. Getchell.....	{ 338
	{ Primary	Ella S. Danforth.....	{ 81
		Mary A. Driscoll.....	
		Maude M. Dutton.....	
		Lucy M. Fletcher.....	
		Jennie C. Hardy.....	
		Maude A. Johnston.....	
		Ellen A. Kidder.....	
		Ella M. Leaver.....	
		Catharine A. McLean.....	
		Ethel I. Murch.....	
		Esther D. Paul.....	
		Carrie L. Power.....	
		Mary E. Regan.....	
Boardman, Primary.....	Henriette E. DeRochemont.....	750	363
	Elizabeth J. Karcher.....	790	
	Mabel E. Blake.....	700	
	Elizabeth M. Born.....	450	
	Harriette G. Gilmore.....	500	
	Maud E. Kimball.....	700	
	Eva G. Oakes.....	700	
	C. Florence Smith.....	700	
	Emma G. Wentworth.....	450	
Cushing, Primary.....	Maude A. Deehan.....	760	78
Dunster, Primary.....	Margaret E. Sheehan.....	500	41
	Susan E. Wyeth.....	760	

* Secretary and Librarian.

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Ellis, Grammar.....	Edward O. Grover.....	\$2,000	502
	Nellie A. Hutchins.....	900	
	Caroline L. Blake	800	
	Adelaide G. Bunker	700	
	Emma A. Faulkner.....	700	
	Harriet Foster.....	700	
	Lottie L. Griswold.....	700	
	Lousie H. Griswold	700	
	Ella M. Horne.....	700	
	Ellen J. Hunt	700	
	Flora C. Ingraham	700	
	Sarah W. Mendell.....	650	
	Mabelle E. Porter.....	700	
	Mary A. Stephenson.....	700	
Felton, Primary.....	Florence A. Rogers.....	770	194
	Marcia R. Bowman.....	700	
	S. Emma Davis	700	
	Carrie H. Smith.....	700	
Gannett, Primary.....	Mary A. Rady.....	775	233
	Annie M. Billings	700	
	Mary A. Doran	700	
	Katherine A. Gaskill.....	550	
	Margaret F. Sanderson.....	550	
Gore, Primary	Gertrude T. Sullivan.....	500	503
	Frances E. Pendexter.....	810	
	Charlotte A. Callahan	550	
	Katherine L. Dolan.....	650	
	Mary L. Dolan	650	
	Minnie A. Doran	700	
	Kate A. Hegarty.....	700	
	Mary A. Hurley.....	700	
	Katherine L. McElroy	700	
	Julia G. McHugh	700	
	Mary E. Mulloney.....	700	
	Anastasia Peters	700	
	Nora E. Reardon	550	
Harvard, Grammar.....	Thomas W. Davis.....	2,000	770
	Arthur B. Webber.....	1,400	
	Ada H. Wellington	900	
	Margaret B. Wellington.....	800	
	Harriette F. Sawin	750	
	Annie M. Street.....	750	
	Addie L. Bartlett.....	700	
	Winifred V. Cobb.....	700	
	Nellie A. Coburn.....	700	
	Frances Fabyan.....	700	
	Margaret M. Fearn's.....	700	
	Estella J. French.....	700	
	Annie B. Lowell	700	
	Josephine MacDonald	600	
	Bernice E. Mayhew	500	
	Waitie M. Nash.....	600	
	Laura L. Parmenter.....	700	
	Louise C. Patterson*	700	

* On leave of absence for study or travel in accordance with Rule 70.

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Harvard, Grammar.....	Annie L. Prince.....	\$550	
	Elizabeth L. Setchell.	700	
	Hortense O. Young.....	700	
Holmes, Primary.....	Lucy C. Wyeth.....	760	92
	Marianne M. Webb	700	
Lassell, Primary	Frances E. Whoriskey.....	770	169
	Rose V. Collier.....	700	
	Elizabeth B. Gahm	700	
	Mary E. Whoriskey.....	700	
Lowell, Primary	Eusebia A. Minard.....	765	69
	Agnes J. McElroy.....	700	
Merrill, Primary	Julia M. Davis	550	202
	Louise W. Harris	700	
	Daisy M. Haynes.....	550	
	Marion B. Magwire	700	
	Nellie S. Walker.....	650	
Morse { Grammar.....	Mary A. Townsend	2,000	{ 500
Primary.....	Mary E. Towle	900	{ 204
	Marcia E. Ridlon.....	750	
	Elizabeth J. Baldwin.....	700	
	Christina R. Denyven	700	
	Ida M. Holden.....	550	
	Ida J. Holmes.....	700	
	Florence E. Hunter.....	650	
	Grace H. Manter	700	
	Alice E. May.....	700	
	Helen Montague.....	550	
	Anna A. O'Connell.....	600	
	Ella M. Pinkham.	700	
	Elizabeth H. Richards.....	700	
	Emilie F. Richardson	700	
	Mary E. Sawyer	700	
	Lucy M. Soulée.....	700	
	Mary E. Warren.....	700	
Otis, Primary	Ellen N. Leighton.....	785	294
	Frances Allen.....	700	
	Anna E. Callahan.....	700	
	Josephine M. Doherty	700	
	Luella M. Marsh.....	700	
	Anna N. Sullivan	500	
	Margaret Sullivan.....	700	
	Ellen C. Walsh	700	
Parker, Primary.....	Mary A. Knowles	780	280
	Charlotte E. Clapp.....	700	
	Butella E. L. Conland	700	
	Mattie S. Cutting.....	700	
	Harriet R. Harrington.....	700	
	Agnes Marchant.....	700	
Peabody { Grammar.....	Frederick S. Cutter	2,000	{ 402
Primary.....	Charlotte A. Ewell.....	900	{ 152
	Mary H. Ellis.....	750	
	Susan C. Allison.....	700	
	Anna F. Bellows.....	700	
	Katherine L. Carr.....	600	
	Helen E. Hazard.....	700	

TABULAR VIEW — Continued.

Names of Schools		Teachers	Salaries	No. of Pupils Dec. 31, 1902
Peabody	{ Grammar..... Primary	M. Lizzie Hewitt	\$700	646
		Martha A. Parker.....	550	
		Effie A. Perkins.....	700	
		Maude R. Pullen.....	700	
		Dora Trefethen.....	600	
Putnam, Grammar.....		Alice M. Tufts	700	
		Frederick B. Thompson	1,850	
		Eliza M. Hussey	900	
		Grace Clark	750	
		Mary A. Carmichael.....	700	
		Anna L. P. Collins	700	
		Sarah M. Grieves.....	700	
		Hattie L. Jewell	700	
		Annie B. Josselyn.....	700	
		Mary A. Macklin	450	
		Marcia T. Marple	700	
		Katharine I. Nicolson.....	650	
		Margaret F. O'Keefe.....	550	
		Eliza S. Paddack.....	750	
		Katherine E. Smyth.....	550	
		Annie A. Trelegan.....	700	
		Minnie F. Wilson.....	550	
Reed, Primary		Margaret T. Burke	770	159
		Elizabeth G. Nelligan.....	600	
		Julia A. Robinson	700	
Riverside, Primary.....		Clara W. Ruggli.....	550	155
		Elizabeth A. Tower	770	
		Amanda M. Alger.....	700	
		Mary A. Burke.....	700	
Roberts, Grammar		Hattie A. Thayer	550	545
		W. Mortimer MacVicar.....	2,000	
		Sara A. Bailey	900	
		Emily R. Pitkin.....	750	
		Susan M. Adams	700	
		Mary Blair	700	
		Elizabeth M. Breslin.....	500	
		Mary M. Brigham.....	700	
		Susan L. Keniston.....	700	
		Evelyn B. Kenney.....	700	
		Ada M. Litchfield.....	700	
		Nina M. Marsh.	700	
		Clara E. Phinney	450	
		Ida G. Smith.....	700	
		Caroline M. Williams.....	700	
Russell	{ Grammar	Arthur C. Wadsworth.....	2,000	{ 333 119
		Alice G. Teele	900	
		Carrie J. Allison.....	700	
		Fannie P. Browning.....	700	
		Ella E. Buttrick.	700	
		Mary A. Connelly	700	
		Anna M. Lyons	450	
		M. Ursula Magrath.....	550	
		H. Maud McLean....	700	
		Gertrude E. Russell	700	
		Loretta L. Shaw.....	700	

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902		
Sargent, Primary	Mary A. Brown..... Christina D. Barbey..... Elmira F. Hall	\$770 700 700	186		
Shepard { Grammar..... { Primary.....	Marion Prescott	650	{ 185 { 122		
	Evelyn J. Locke	900			
	Mary E. Bassett.....	700			
	Corabelle H. Bates ..	550			
	Mary F. Calnane	700			
	Florence M. Dudley	700			
	Alice M. Gage	700			
	Mary M. Gilman...	700			
	Theresa H. Mahoney.....	650			
Sleeper { Grammar..... { Primary.....	A. Estelle Ingraham.....	900	{ 129 { 192		
	Emily Bissell.....	700			
	Evelyn M. Dormer.....	700			
	Fannie G. Flanders.....	700			
	Elizabeth O. Haynes.....	550			
	Melissa M. Lloyd.....	700			
	Margaret E. Quinn	500			
	Blanche C. Trefethen.....	700			
	Fannie E. Higgins	770			
Stearns, Primary.....	Maria J. Bacon.....	700	182		
	Ellen A. Cheney.....	700			
	Eva A. Taylor.....	700			
Tarbell, Primary.....	Emma J. Young	770	188		
	Florence J. Alley.....	700			
	Carrie P. Pierce	700			
Taylor { Grammar..... { Primary.....	Anna H. Welsh	500	{ 156 { 249		
	Ella R. Avery.....	900			
	Mary A. Boland.....	700			
	Bridget T. Boyle	700			
	Lillian M. Canty.....	700			
	Lillian W. Davis.....	450			
	Josephine Day	700			
	Cecelia F. Leahy.....	700			
	Maud J. Paget.....	600			
	Agnes M. Sheridan.....	700			
	Mabelle S. Welsh.....	550			
	Thorndike, Grammar.....	Ruel H. Fletcher		2,000	544
		Harriet A. Townsend.....		900	
Laura A. Westcott		750			
Flora E. Cooter.....		450			
Jennie W. Cronin		450			
Grace W. Fletcher.....		700			
Mary A. Grant		650			
Harriet M. Hanson		700			
Emma A. Hopkins.....		700			
Lillian H. Kenney.....		500			
Mary E. Nason.....		700			
Ellen M. Plympton.....		700			
Susan L. Senter.....		700			
Lydia A. Witcher.....		800			
Washington, Grammar.....		John W. Freese	2,000	427	
		Blanche E. Townsend	900		
		Alice P. Fay	750		

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1902
Washington, Grammar	Eldora J. Clark	\$700	745
	Mary L. Ells	700	
	Helen G. Fulton	600	
	Winifred L. Kinsley	700	
	Emma Penney	700	
	Margaret J. Penney	700	
	Bessie H. Pike	700	
	Hattie Shepherd	700	
	Mary E. Stiles	700	
Webster, Grammar	John D. Billings	2,000	
	George L. Farley	1,200	
	Alice C. Phinney	900	
	Martha N. Hanson	800	
	Ada A. Billings	750	
	Mabel T. Ashley	700	
	Charlotte M. Chase	700	
	Fanny F. Curtis	700	
	Susan I. Downs	700	519 410
	Gertrude B. Duffy	550	
	Josephine Hills	700	
	Gertrude I. Johnson	700	
	Minnie V. Reid	700	
	Harriette E. Shepard	700	
	Olive L. Slater	700	
	Maud A. Sumner	650	
	Ellen F. Watson	700	
	Katherine L. Wight	600	
Wellington { Grammar	Herbert H. Bates	2,500	519 410
{ Primary	Sarah J. Gunnison	1,000	
	Margaret Kidd	1,000	534
	Mary I. Vinton	1,000	
	Carrie H. Stevens	900	
	Emma M. Taylor	700	
	Training Class	8,556	
Willard, Primary	Katharine E. Hayes	760	
	Agalena Aldrich	500	
	Sally N. Chamberlin	700	
	Elizabeth M. Crowley	500	
	M. Elizabeth Evans	700	245
	Ella F. Gulliver	700	
	Julia S. Gushee	700	
	Mary E. G. Harrington	700	
	Katherine M. Lowell	700	
	Mary A. O'Hara	600	
	Belle Menard	700	
	Eliza D. Watson	700	
	Grace R. Woodward	700	
Wyman, Primary	M. Carrie Dickman	780	54
	Addie M. Bettinson	700	
	Mary H. Brooks	700	
	Georgianna P. Dutcher	700	
	Genevieve S. Flint	700	
	Agnes Ross Smith	550	
Kinder- gartens { Boardman	Mary B. Pratt	700	
{	Hattie P. Russell	550	

TABULAR VIEW — Concluded.

Names of Schools		Teachers	Salaries	No. of Pupils Dec. 31, 1902
Kinder- gartens	Corlett	Sarah S. Wells.....	\$700	46
		Annie M. Dodd.....	600	
	Dunster.....	Clara A. Hall	700	28
	Gannett.....	Carrie E. Shepherd.....	700	56
		Marion L. Akerman.....	550	
	Gore	Selma E. Berthold	700	61
		Jennie S. Clough	600	
	Lowell	Melinda Gates.....	700	36
	Merrill	Caroline A. Leighton	700	60
		Gretchen K. Weinschenk	550	
	Peabody	Julia L. Frame	700	39
	Riverside.....	Edith L. Lesley	700	56
		Olive M. Lesley.....	600	
	Shaw	Harriette E. Ryan*.....	700	53
		Leonice S. Morse.....	650	
		Della E. Cabot	450	
	Sleeper.....	Mabel S. Adams.....	700	56
		Caroline E. Simpson.....	550	
	Taylor.....	Mary F. Leland.....	700	65
		Bertha V. Jameson.....	550	
	Wellington.....	Gertrude M. Gove.....	700	54
		Florence Rice.....	600	
	Willard	Alice V. McIntire	700	58
		Anna M. Gage.....	450	

* On leave of absence for study or travel in accordance with Rule 70.

TEACHERS OF SEWING — Agnes Gordon	\$700
Alice H. Nay	600
Nancy T. Dawe	600
DIRECTOR OF MUSIC — Frederick Elmer Chapman	2,000
ASSISTANT IN MUSIC — Georgia E. Martin	800
DIRECTOR OF DRAWING — Peter Roos	1,900
ASSISTANT IN DRAWING — Lucia N. Jennison	800
DIRECTOR OF NATURE STUDY — Sarah E. Brassill	1,000
DIRECTOR OF PHYSICAL TRAINING — Sara Eleanor Boudren	900
INSTRUCTOR OF PHYSICAL TRAINING IN THE HIGH SCHOOLS — Bessie W. Howard	700
SUPERINTENDENT — Francis Cogswell	3,500
SUPERVISOR OF PRIMARY SCHOOLS — Mary A. Lewis	1,200
AGENT — Sanford B. Hubbard	2,100
CLERKS — Althea B. Frost	750
Myrta E. Smith	600
PORTER — John Lemon	600
TRUANT OFFICERS — Lucian S. Cabot	1,000
John Carmichael	1,000
William H. Porter	1,000
Thomas F. Riley	900

SUMMARY.

Number of pupils in Latin School	489
Number of pupils in English High School	541
Number of pupils in Rindge Manual Training School	272
Number of pupils in Grammar Schools	6,898
Number of pupils in Primary Schools	5,825
Number of pupils in Kindergartens	722
Total	14,747
Number of pupils belonging to the public schools. December 31. 1901	14,494
Increase of pupils, 1902	253
Increase of pupils, 1901	62
Increase of pupils, 1900	332
Increase of pupils, 1899	314
Increase of pupils, 1898	476
Increase of pupils, 1897	422
Increase of pupils, 1896	714
Increase of pupils, 1895	250
Increase of pupils, 1894	278
Increase of pupils, 1893	135
Increase of pupils, 1892	210
Average annual increase of pupils from 1892 to 1902 (inclusive)	313

COST OF INSTRUCTION.

Schools and Officers	Cost of Instruction	Average Number of Pupils	* Cost per Pupil
Latin School.....	\$25,236 00	465	\$54 27
English High School.....	26,747 51	498	53 71
Manual Training School.....	19,108 67	242	78 96
Training School (Teachers).....	15,656 42	887	17 65
Grammar Schools (except Training School)	127,747 99	6,227	20 52
Primary Schools (except Training School)	89,927 49	5,305	16 95
Kindergartens.....	16,227 17	620	26 17
Teachers of Sewing.....	1,900 00	....	....
Directors of Music.....	2,240 00	....	....
Directors of Drawing.....	2,700 00	....	....
Director of Nature Study.....	1,000 00	....	....
Directors of Physical Training.....	1,110 00	....	....
Substitute Teachers.....	1,565 75	....	...
Superintendent.....	3,500 00	....	....
Supervisor of Primary Schools.....	1,200 00	....	....
Agent.....	2,100 00	....	....
Clerks.....	1,350 00	....	....
Truant Officers.....	3,870 00	....	....
Porter.....	600 00	....	....
Total.....	\$343,787 00	14,244	\$24 14

Cost of instruction in Evening High School	\$1,682 75
Cost of instruction in Evening Elementary Schools	3,218 50
Cost of instruction in Evening Drawing Schools	†1,298 00
Total	\$6,199 25

* Until 1901 it has been the practice to use the number belonging to the schools in December in getting these averages. This year and last the average number belonging during the school year has been used. This changes the averages, but seems the proper basis on which to compute them.

† The Director of Drawing is principal of these schools. No part of his salary has been included in this amount.

REMARKS ON THE STATISTICS.

The number of pupils registered during the year ending June, 1902, is 16,341; the average number belonging, 14,244; the average daily attendance, 13,215. In the per cent of attendance there has been an increase of seven-tenths of one per cent over last year. The number belonging to the schools in December, 1901, was 14,494; in December, 1902, 14,747, an increase of 253. The entire cost of the day schools, which includes the cost of instruction, of text-books and supplies, of incidental expenses, of the care of truants, of the care and repair of school-houses, and of the transportation of pupils, is less than that of last year by \$1,851.51. In the cost of instruction there has been an increase of \$7,637.20.

While Cambridge expends a large amount for her schools, there are *two hundred eighteen* towns and cities in the State which make a larger expenditure in proportion to their wealth. In a list of the thirty-three cities, arranged numerically according to the percentage of their taxable property appropriated to the support of public schools for the year 1901–1902, Cambridge is the *twenty-fifth*. In a list of the towns and cities of the State, arranged numerically according to the sum appropriated for each child in the average membership of the public schools, Cambridge is the *twenty-eighth*.

These statistics relating to the schools of the State are taken from the sixty-sixth annual report of the secretary of the Board of Education.

TEXT-BOOKS AND SUPPLIES.

At a meeting of the Board in December the committee on supplies submitted a detailed report of the expenditures of that committee for the year. The report is as follows:—

In accordance with Section 30 of the Rules of the School Board, the Committee on Supplies submits its eighteenth annual report for the year ending July 1, 1902:—

Stock on hand July 1, 1901	\$5,231 81	
Purchases and expenditures to July 1, 1902	20,145 21	
		\$25,377 02
Cash sales and damages	\$440 36	
Delivered to schools, officers, etc.	20,223 69	
		20,664 05
Stock on hand July 1, 1902		\$4,712 97

The purchases and expenditures have been : —

For text-books	\$7,789 76	
Desk and reference books	97 47	
Copy books	679 96	
Apparatus and furnishings	2,721 23	
Printing, \$174.50; expressage and labor, \$308.36	482 86	
Repairing books, \$398.53; diplomas, \$238.62	637 15	
Tuning pianos	18 50	
Miscellaneous supplies, etc.	7,507 60	
		\$19,934 53
Less the value of exchanges	.	65 49
		<u>\$19,869 04</u>

The net cost of text-books and supplies is as follows : —

Stock on hand July 1, 1901	\$5,231 81	
Bills paid by City Treasurer	19,869 04	
		\$25,100 85
Less stock on hand July 1, 1902	\$4,712 97	
Cash paid to City Treasurer, sales and damages	440 36	
		5,153 33
We have, net cost of all schools and officers		<u>\$19,947 52</u>

or an average cost per pupil of \$1.40. The average cost per pupil per annum for eighteen years has been \$1.263.

The annual cost per pupil for text-books and supplies since the introduction of the free text-book law is as follows :—

Year	Cost per Pupil	Year	Cost per Pupil	Year	Cost per Pupil
1885	\$1.880	1891	\$1.248	1897	\$1.094
1886	1.170	1892	1.149	1898	1.268
1887	1.051	1893	1.109	1899	1.225
1888	1.068	1894	1.243	1900	1.740
1889	0.960	1895	1.152	1901	1.203*
1890	1.334	1896	1.436	1902	1.400*

* Until 1901 it has been the practice to use the number belonging to the schools in December in getting these averages. This year and last the average number belonging during the school year has been used. This changes the averages, but seems the proper basis on which to compute them.

	Net Expenses	Cost per Pupil				
		*1902	*1901	1900	1899	1898
Latin School.....	\$1,855 50	\$3.990	\$3.935	\$6.804	\$3.245	\$3.594
English High School.....	1,813 44	3.641	4.236	4.642	3.888	3.535
Manual Training School.	2,798 67	11.564	11.707	13.515	.....	.....
Training School, teachers	627 09	.707	.704	.....	.....	.....
Grammar Schools.....	4,789 84	1.152	1.068	1.747	1.476	.977
Mixed Schools.....	3,744 22	1.140	.933	1.573	1.001	1.532
Primary Schools.....	2,158 22	.528	.431	.396	.425	.540
Kindergartens.....	390 84	.630	.329	.692	.303	1.003
Evening Schools.....	445 41	.....	.....	.....	.....	.....
Special Teachers.....	81 83	.....	.....	.....	.....	.....
Officers of Board.....	209 20	.....	.....	.....	.....	.....
Miscellaneous expenses (not chargeable to any grade).....	1,054 97	.....	.....	.....	.....	.....
	\$19,969 23					
Less profit on sales.....	21 71	.....	.....	.....	.....	.....
	\$19,947 52	\$1.400	\$1.203	\$1.740	\$1.225	\$1.268

There will be naturally some fluctuation from year to year in the average cost of text-books and supplies, as may be noticed in the preceding table.

A piano, which has been needed at the Latin school since the new building was occupied, was bought for \$400, and another to replace a very old one at the Webster school for \$325.

Five new lathes have been bought for the Rindge manual training school at a cost, including the expense of installing the same, of \$500. Repairs on the apparatus in the blacksmith shop have also been made. To replace books and supplies destroyed by fire at the Allston school cost \$650, and two new sloyd outfits have been bought at a cost of \$632.

The regular expenditures for text-books and supplies for the current financial year, estimated on the number of pupils in the schools December 1, 1902, will be \$18,625.46.

Additional equipment will be needed at the Rindge manual training school to provide for the increased number of pupils, and for this a special appropriation of \$2,000 is asked.

By a law passed in 1895 the school committee was required to provide a flagstaff and a flag for every school building, and to have the flag displayed when the weather was suitable. To repair and replace the flags and flagstaffs entails each year a considerable outlay; but it is an

* Until 1901 it has been the practice to use the number belonging to the schools in December in getting these averages. This year and last the average number belonging during the school year has been used. This changes the averages, but seems the proper basis on which to compute them.

expenditure required by statute, and is not at the discretion of the school committee. Last year \$200 was asked for, but only \$100 was appropriated, and this sum was exhausted early in the year. For the coming year \$200 at least will be required.

CHANGES IN TEXT-BOOKS.

The following is the rule relating to changes in text-books: "All proposals for changes in text-books shall be made to the superintendent. If believed by him to deserve consideration, he shall appoint two persons, one of whom shall be a teacher in the service of the city, and they and the superintendent shall examine and each make a written report on the proposed books. These reports shall be kept on file in the office of the superintendent, and shall be open to inspection by members of the Board only. Changes so considered may be recommended to the Board for adoption, when they shall be referred to the committee on text-books."

Under this rule the following text-books have been adopted by the Board during the year 1902:—

For use in the Latin school, Botsford's History of Rome; Cauer's Odyssey.

For use in the English high school, Adams's Commercial Geography; Siedel's Leberecht Hühnchen.

For use in the grammar or primary schools, Brown's Stories of Woods and Fields; the New McGuffey Readers; Shaylor's Vertical Round Hand Writing Books.

For use in all the schools, the Standard Dictionaries to be used in addition to those already authorized.

SCHOOL ACCOMMODATIONS.

The following is from the report of the committee on school-houses:—

In compliance with Section 30 of the Rules of the School Board, the Committee on Schoolhouses respectfully submits the following:—

During the year the building for the accommodation of the Washington grammar school and for the large increase in the Rindge manual training school has been completed. It was occupied in part by pupils of the Rindge manual training school in September, and by the pupils of the Washington school in October. About sixty of the pupils of the Washington school were transferred to the Peabody and Russell schools.

There has been expended on this building to date \$62,294.70, with a balance of \$23,555.96 of the appropriation unexpended.

This schoolhouse is a notable addition to the group of buildings of which the public library is the centre. The exterior is ornamental, and the interior arrangement is ample and convenient. It is heated by steam from the boilers in the Rindge manual training school.

On account of the lack of funds it was thought necessary to put renovated furniture from the old building into many of the rooms, so that much of the furniture is on castings not adjustable which should be replaced by adjustable irons as soon as possible.

Last year land was purchased on Willow street for the site of a schoolhouse at a cost of \$9,500. Plans were procured and the erection of the building was begun in June, with the expectation that it would be completed by July 1, 1903.

It has been decided not to rebuild the Allston schoolhouse, and land costing \$11,257.75 has been purchased on Elm street for a new building, but no further progress has been made. The schools in the districts which these buildings are to accommodate are so crowded that it is impossible to do the most efficient work. Increased accommodations are also required in Wards Six and Seven.

Better ventilation and drainage are needed for several of the schoolhouses; more furniture, especially at the Morse school, should be supplied with adjustable irons; and the whole system of plumbing at the Rindge manual training school should be removed and made modern.

The following table shows the items of expenditures for the care and repair of schoolhouses:—

Janitor service	\$34,106 63
Janitors' supplies	1,724 23
Fuel	11,377 87
Gas and electric lighting	2,082 88
Furnishings	1,628 94
Furniture for new schoolhouse, Ward VIII.	569 50
Ordinary repairs	12,036 23
Expenses on different buildings on account of the fire at the Allston school	1,600 69
Total	<u>\$65,126 97</u>

Section 31 of the city charter provides that "The mayor shall appoint the janitors of schoolhouses, subject to confirmation by the school committee, and may remove them at pleasure for cause assigned; and such janitors shall perform their duties under the direction of the school committee."

Under the direction of the committee on schoolhouses, the agent supervises and directs the work of the janitors, and reports to the committee such matters as seem to need consideration. The principals of the schools report each month whether or not the work is done in a satisfactory manner.

The following is from the report of the committee on schoolhouses :—

The work of the janitors of schoolhouses has been done in a more satisfactory manner on the whole than in years past, many of the janitors taking pride in doing their work well and so raising it above drudgery.

The heating apparatus, and in general the heating of the buildings, has been under the supervision of Edward B. Dale, who has been faithful and efficient in this work; and very few rooms have been closed because of lack of heat.

The only change in the force is the appointment, September 11, of John S. Leamer as janitor of the new Washington schoolhouse.

PLAN OF THE SCHOOL REPORT.

For many years the subject matter and arrangement of the statistical part of the school reports have remained essentially unchanged. This has been done because statistics become increasingly valuable when continued on the same plan from year to year. For several years the reports have also contained certain definite information relating to the organization and conduct of the schools, such as is frequently sought by parents and persons interested in school affairs. This has enabled the superintendent to answer many letters of inquiry by simply mailing a school report.

LATIN SCHOOL.

The following table shows the membership of the Latin school and the cost of instruction from year to year for the past eleven years. In this table the cost per pupil is based upon the average number of pupils for the year. In the tables printed in previous reports down to and including the year 1900, the cost per pupil is based upon the number of pupils belonging to the school in December :—

December	Average Number of Pupils	Number of Teachers in December	Cost of Instruction	Cost per Pupil	Number of Graduates
1892.....	213	10	\$12,751 07	\$59 86	22
1893.....	251	11	13,425 66	53 49	23
1894.....	303	12	14,359 66	47 39	27
1895.....	354	14	15,059 58	42 54	25
1896.....	373	15	16,525 00	44 30	34
1897.. ..	358	16	17,335 00	48 42	35
1898.....	362	16	18,325 00	50 62	43
1899.....	371	19	19,318 68	52 07	43
1900.....	404	22	21,819 00	54 01	39
1901.....	468	22	23,710 34	50 66	56
1902.....	465	24	25,236 00	54 27	62

The cost of the Latin school to the city is less than the above sums by the amount received from the Hopkins Fund, which can be used only for classical instruction, and by the amount received for the tuition of non-resident pupils. This year the amount received from the Hopkins Fund was \$621.56; for the tuition of non-resident pupils, \$1,702.

The course of study is arranged for five years, or for four years, and is almost wholly decided by the requirements for admission to Harvard

College. Eleven per cent of all the graduates have completed the work in four years. The following is the rule relating to the admission of pupils to the high schools: "Pupils who have received the diploma of a Cambridge grammar school may, on recommendation of the master, be admitted to either high school without an examination. For other persons who desire admission, an examination shall be held at the beginning of the autumn term under the direction of the superintendent, but pupils who are qualified to join existing classes may be admitted at any time on application to the principal. No pupil from any grade in a grammar school shall be examined who does not present a satisfactory certificate that he has pursued his studies during the summer vacation."

From three-fourths to four-fifths of the graduates are usually recommended for admission without an examination. About one-half of the remaining part study during the summer vacation, as required by the rule, and take an examination in September. Pupils who pass a fairly good examination are permitted to attend either high school until the Christmas vacation, at which time their connection with the school as regular pupils ends unless their work has been satisfactory.

Diplomas of graduation signed by the mayor and the head master of the school are awarded to pupils of the high schools who have successfully completed the course of study or its full equivalent, and have sustained a good character.

For non-resident pupils the tuition is \$80 a year, payable in advance,—one-half at the beginning and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 1.30 P. M.

The following is from the report of the head master of the Latin school:—

No change has been made in the course of study. The school has had a steady growth since its organization in 1886. Then there were one hundred sixty-eight pupils belonging to the school, now there are nearly five hundred. The number of graduates has also increased from twenty-two in 1892 to sixty-two in 1902.

A number of valuable gifts have been received during the year: 1. Cast of Minerva, from the class of 1877. 2. Cast of Venus, from the class of 1902. 3. A large framed picture, The Discobolus, from the editors of the *Latin and High School Review* and the Alumni of the Latin School. 4. Busts and maps, from William A. Munroe, as follows: (a) Bust of Jupiter of Otricoli. Original in the Vatican. (b) Bust of Juno Ludovisi. Original in the Villa Ludovisi, Rome. (c) Bust of Augustus Cæsar. From statue in the Vatican. (d) Bust of Virgil. (e) Bust of Venus of Melos. From statue in the Louvre. Three of

Keipert's maps: (a) Italia Antiqua. (b) Latii Veteris et Finitimarum Regionum. (c) Imperii Romani.

COURSE OF STUDY FOR THE LATIN SCHOOL.

FIFTH CLASS. (TENTH GRADE.)

Latin, every day during the year. Collar & Daniell's First Latin Book, entire.

Algebra, every day during the year. The Metric System.

Physiology and Hygiene, every other day the first four months.

History of England, every other day the last six months.

English, every other day during the year. Lewis's First Book in Writing English; The Lady of the Lake. Daily practice in writing English.

FOURTH CLASS. (ELEVENTH GRADE.)

Latin, every day during the year. Allen & Greenough's Latin Grammar; Daniell's Latin Composition; Nepos's Lives; Cæsar's Gallic War, four books; Ovid.

French, four times a week during the year. Grandgent's Short French Grammar; Rogers's French Sight Reading; Super's French Reader; Peppino.

Or

German, four times a week during the year. The first half of Collar's Eysenbach's German Lessons; Van Daell's Preparatory German Reader; Guerber's Märchen und Erzählungen.

Geometry, every day the first six months.

Greek and Roman History, every day the last four months.

English, one exercise a week for the year. Reading of books required for admission to Harvard College. Theme writing twice a week.

THIRD CLASS. (TWELFTH GRADE.)

Latin, four times a week during the year. The Æneid, Books I., II., III., IV.; Allen & Greenough's Latin Grammar.

Greek, every day during the year. White's First Greek Book; Chapters I., II., III., of Book I. of the Anabasis.

Instead of Greek, pupils can take German or French; those who have had French in the fourth class take German; and those who have had German in the fourth class take French. The text-books are the same as for the fourth class.

French, every other day during the year. Chardenal's Complete French Course; L'Abbé Constantin; Le Pacte de Famine; Le Conscrit; Colomba; La Tulipe Noire; French Composition (Anecdotes): memorizing of Anecdotes; sight reading.

Or

German, every other day during the year. Collar's Eysenbach's German Lessons; Hoffman's Historische Erzählungen; Immensee; Höher als die Kirche; Wilhelm Tell.

Physics or Chemistry, every day during the year.

English, once a week during the year. Reading of books required for admission to Harvard College. Theme writing twice a week.

SECOND CLASS. (THIRTEENTH GRADE.)

Latin, every day during the year. Ovid: The Æneid, Books V., VI., VII., VIII.; Nepos's Lives; Sallust's Catiline; Jones's Latin Composition; Latin Grammar. Written exercises in Latin or Latin at sight, once a week.

Greek, every day during the year. Goodwin's Greek Reader to page 110; Goodwin's Greek Grammar; Jones's Greek Composition, ten exercises. Written exercises in Greek Grammar or Greek at sight, once a week the last four months.

Instead of Greek continue German or French elected in the third class. The text-books are the same as for the third and second classes.

French, every other day during the year. L'Avare; La Fontaine's Fables; La Chute; Mlle. de la Seiglière; French Composition (Anecdotes); French Grammar; sight reading.

Or

German, every other day during the year. Harris's German Composition: Die Jungfrau von Orleans; Ekkehard; Minna von Barnhelm; Peter Schlemihl; Aus dem Staat Friedrichs des Grossen.

Physics or Chemistry, every other day during the year.

Ancient History, Greece and Rome, every other day during the year.

Algebra, every other day during the year. Written exercises once a week during the last five months.

English. Reading of books required for admission to Harvard College. Written essays.

FIRST CLASS. (FOURTEENTH GRADE.)

Latin, every day during the year. The Æneid, and the Bucolics and the Georgics; Cicero, twelve orations, of which two are at sight. Also written exercises twice a week during the year in Latin Composition (including the review of Nepos for written work) or Latin at sight.

Greek, every day during the year. Homer, Books I., II., III., IV., entire, and the other selections in Johnson's Iliad; Jones's Greek Composition, last thirty exercises. Written exercises once a week in prose composition, Greek Grammar or Greek at sight.

Or

French, every other day during the year. Le Cid; Athalie; Le Conscriit; Lamartine's Scènes de la Révolution Française; Bouvet's French Composition. Those who take this French will also take Trigonometry and Solid Geometry.

Geometry, every other day during the year. Written exercises including original demonstrations once a week during the year.

Trigonometry and solid Geometry, every other day during the year.

College Algebra (elective), every other day during the year.

English, every other day during the year. This includes reading (for the first time or in review) the books in English required for admission to Harvard College.

ENGLISH HIGH SCHOOL.

The following table shows the membership of the English high school and the cost of instruction for eleven years. Until January 1, 1899, the pupils of the Rindge manual training school were included in the membership of the English high school. This explains the smaller number of pupils since 1898.

In this table the cost per pupil is based upon the average number of pupils for the year. In the tables printed in previous reports down to and including the year 1900, the cost per pupil is based upon the number of pupils belonging to the school in December : —

Year	Average Number of Pupils	Number of Teachers in December	Cost of Instruction	Cost per Pupil	Number of Graduates
1891.....	480	16	\$18,767 50	\$39 10	48
1892.....	529	19	20,488 50	38 73	77
1893	569	19	22,095 00	38 83	95
1894.....	611	21	23,051 00	37 73	91
1895.....	648	21	24,369 40	37 60	89
1896	632	21	24,612 00	38 94	72
1897.....	644	23	25,194 09	39 12	90
1898.....	685	23	26,051 17	38 03	97
1900.....	514	24	25,250 50	49 13	68
1901.....	517	24	26,265 58	50 80	60
1902	498	24	26,747 51	53 71	86

The requirements for admission to this school and the rules relating to the granting of diplomas are the same as for the Latin school.

For non-resident pupils the tuition is \$80 a year, payable in advance,—one-half at the beginning and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 1.30 P. M.

The following is from the report of the head master of the English high school :—

Six boys and one girl from the English high school took the Harvard admission examinations in the summer of 1902, two for Harvard College, one for Radcliffe College, and four for the Lawrence Scientific School. They attempted thirty-eight subjects and passed in thirty, winning four honors. Eight boys and one girl from this school took forty admission examinations at the Massachusetts Institute of Technology, passing in thirty-five. Those who took their finals passed clear, and anticipated one or more subjects of the freshman year in each case. Some of these sixteen also took in the autumn additional examinations which are known to have been successful, but of which no detailed report has been received. Two recent graduates of the school, after spending a year or two in business took admission examinations at Dartmouth College last summer with complete success. It is probable that when they entered the high school not more than half of these eighteen expected to go to college or to a scientific school. The desire for higher education was a development from their school career,—in two cases from their business career. This illustrates the difficulty of determining at the age of fourteen the future of an American child, and proves the wisdom of flexibility in school courses.

Within the year the school has been the recipient of three tasteful casts ; two given by the graduating class of 1902 on leaving school, and the third coming from the editors of the *Latin and High School Review*, whose former gifts have been gratefully acknowledged. These casts are very welcome. They make an appropriate and graceful addition to the ornamentation of our assembly hall, where they are seen daily by all the pupils, and tend to improve their æsthetic taste. They also serve a valuable purpose as reminders of the kindly appreciation of the school entertained by the donors.

Among the graduates of this school in the class of 1900 was a young colored girl who had done much to earn her own way while a student here. After her graduation, through the kindly aid of some Cambridge ladies, she was enabled to take a year at the Salem normal school. In the following autumn she became a teacher in the Bethany Normal and Industrial Institute in her native state, North Carolina, where she found

herself in a position of genuine leadership as a teacher. Her letters to her former teachers led them to inquire whether there were any needs of her pupils which our school could supply. The response came that suitable clothing would relieve the winter necessities of the boys and girls (the school is in the mountains) and would make it possible for some to attend who otherwise must remain at home.

The case was laid before the pupils of this school in November, 1901, with the result that six boxes and barrels, well filled, were sent to the institute. The same action was taken this year, and letters from the happy recipients telling of their joy and of their appreciation of the kind remembrance, are now arriving. It would be hard to determine which have profited most by the experience, the receivers in North Carolina or the givers in Massachusetts.

COURSES OF STUDY FOR THE ENGLISH HIGH SCHOOL.

There are four courses of study,—a general course, a course preparatory for the scientific schools, a commercial course, and a domestic science course, each arranged for four years. The commercial course was formerly a two years' course. The course in domestic science was introduced in 1899.

It is the plan of the courses that all pupils in the school shall pursue substantially the same subjects for their first year, but thereafter shall have increasingly divergent studies, opened to choice within reasonable limitations, and determined largely by aptitude and expectation of subsequent career.

These general statements apply to all the courses :—

1. All pupils will have a weekly exercise in music (choral singing).
2. Drawing is required of all once a week for the first year, and is opened to all as an extra subject during the remaining three years.
3. It is expected that no two foreign languages will be begun the same year; that any foreign language once begun will ordinarily be continued for two years, and that a modern foreign language will not be continued longer than two years, except by work in conversation.
4. Variations from the courses as stated are permissible with the approval of the head master.

The following outline presents the courses in detail :—

GENERAL COURSE.

Subjects.	Hours per week.
FIRST YEAR.	
Latin, French or German.....	5
Algebra.....	5
English History (7 mos.) and Physiology (3 mos.).....	3
English.....	3
Drawing.....	1

Subjects.	Hours per week.
SECOND YEAR.	
Latin, French or German.....	5
Physics	5
English.....	3
Geometry, 3; or History of Greece and Rome.....	3

THIRD YEAR.	
Latin.....	} (one or two).....5 or 10
French	
German	
Chemistry	3
Botany.....	2
English.....	3
History of the United States, elementary.....	3
Harmony, as an extra subject	2

Pupils who take two foreign languages this year may omit Botany and either Chemistry or History.

FOURTH YEAR.	
Latin.....	} (one or two).....5 or 10
French	
German	
English.....	5
Civics	2
Astronomy.....	2
History of the United States, elementary, or detailed study of a limited period. ...	3
Counterpoint and Melodic Instruction, as an extra subject.....	2

Pupils who take two foreign languages this year may omit Civics and Astronomy.

COURSE PREPARATORY FOR THE SCIENTIFIC SCHOOLS.

Subjects.	Hours per week.
FIRST YEAR.	
French or German.....	5
Algebra.....	5
English History (7 mos.) and Physiology (3 mos.).....	3
English.....	3
Drawing.....	1

SECOND YEAR.	
French or German.....	5
Physics ...	5
Geometry.....	3
English.....	3
History of Greece, as an extra subject, (required after September, 1902) ..	3

THIRD YEAR.	
German or French.....	5
Reviews in Algebra and Geometry.....	5
Chemistry.....	5
English	3
History as an extra subject, either of the United States, elementary, or of Rome, (required after September, 1902).....	3

Subjects.	Hours per week.
FOURTH YEAR.	
German or French.....	5
Advanced Mathematics (at present Solid Geometry and Advanced Algebra).....	5
College English.....	3
History of the United States, elementary, or detailed study of a limited period....	3
Review of English History when required.....	2
Conversational French or German.....	2

COMMERCIAL COURSE.

Subjects.	Hours per week.
FIRST YEAR.	
French or German.....	5
Algebra.....	5
English History (7 mos.) and Physiology (3 mos).....	3
English	3
Drawing.....	1
SECOND YEAR.	
French or German.....	5
Physics, 5; or Geometry, 3, and History of Greece and Rome, 3.....	5 or 6
English	3
Bookkeeping and Commercial Forms.....	3
THIRD YEAR.	
Stenography and Typewriting.....	5
Chemistry, 3, and Botany, 2; or French or German.....	5
English.....	3
Geometry, or History of Greece and Rome, or of the United States, elementary...	3
FOURTH YEAR.	
Descriptive Economics, Commercial History and Geography.....	5
English.....	5
Civics, 2, Astronomy, 2; or French or German.....	5
History of the United States, elementary, or a detailed study of a limited period..	3

DOMESTIC SCIENCE COURSE.

Subjects.	Hours per week.
FIRST YEAR.	
Latin, French or German.....	5
Algebra.....	5
English History (7 mos.) and Physiology (3 mos.).....	3
English.....	3
Drawing.....	1
SECOND YEAR.	
Latin, French or German.....	5
Sloyd	5
English.....	3
Geometry, or History of Greece and Rome.....	3

Subjects.	Hours per week.
THIRD YEAR.	
French or German.....	5
English.....	3
Chemistry	3
Botany.....	2
Food and its preparation.....	5
History of Greece and Rome, or of the United States, elementary, as an extra subject.....	3

FOURTH YEAR.	
French or German.....	5
English.....	5
Household Chemistry and Hygiene.....	5
History of the United States, elementary, or study of a detailed period.....	3

FIRST YEAR.

The English of the first year deals with both literature and composition. The works of literature studied are Dickens's Tale of Two Cities; Scott's Ivanhoe, and Marmion; Shakespeare's Richard III.; Tennyson's Lancelot and Elaine and other Idylls of the King. The composition work is based upon a manual and covers the following topics among others: punctuation, capitals, the combination and transformation of elements, the principles of expression, the figures of speech, and exercises in development, reproduction, paraphrasing, composition, and letter writing.

The work in algebra is a substantial grasp of the field as far as affected quadratics.

The English history is carefully studied with the help of a text-book, note books, illustrative material, written work, and some collateral reading.

The work in physiology includes visits of classes with their teachers to the Agassiz Museum, and other objective helps.

SECOND YEAR.

The second year introduces important differences, yet gives certain subjects to all.

The foreign language begun in the previous year must be continued.

Physics is required in two courses, is optional in one, and is replaced by sloyd in the fourth. It includes laboratory work by the pupils, experiments by the teacher, records of observation and inferences, the solution of practical problems, and the usual recitation and examination methods.

The work in sloyd will follow as a suggestion and guide the normal course, so called, explained and illustrated in Larsson's Sloyd for American Schools. Selections will be made from among the thirty-one models therein described as the needs and capabilities of the pupils warrant.

The English, which is required of all pupils on its literature side, will include Dickens's Christmas Stories; Hawthorne's Twice-Told Tales; Scott's Abbot, and the Lady of the Lake. The composition work, based on another manual, will give a review in new forms and a continuation of the first year's work; a brief history of the English language, its Anglo-Saxon and classical elements; and the more obvious properties of diction.

Geometry is required in the course preparatory for higher institutions but is optional in the other courses. The work is an introduction to plane geometry.

Bookkeeping is required in the commercial course. The work is based on a text-book and accompanying papers. The pupil is led to make actual use of vouchers substantially as they are employed in business and to write his bookkeeping records from them under the guidance of carefully arranged directions.

The history of this year is an informational survey of the progress of civilization in Greece and Rome. It is an optional subject in all the courses.

The Latin of this year is selected from Nepos.

THIRD YEAR.

In this year somewhat broader options are possible in the several courses. Latin may be continued in the general course or may be dropped for a modern language. Those who have pursued either French or German for two years must now exchange that language for the other, or, in the commercial course, take certain sciences instead. Each course now provides work more distinctively its own, while offering also elements that make for general culture.

In Latin, Cæsar and Ovid are read.

The work in chemistry consists largely in laboratory practice, great importance being attached to skilful manipulation, keen observation, logical reasoning, and the neat, orderly, and accurate recording of work done and results reached. The course follows "An Outline of Requirements in Chemistry" issued by Harvard University.

In botany similar methods are followed so far as the nature of the subject and the briefer time permit.

The English work of this year deals chiefly with literature, and bases upon it the written work required. The works studied are Goldsmith's

Deserted Village, Traveller, and Vicar of Wakefield; the Sir Roger de Coverley Papers; Scott's Quentin Durward; Shakespeare's Merchant of Venice, and Julius Cæsar; and Selections from British Masterpieces. The pupils preparing for higher institutions read instead of the above the works designated for examination for entrance to those institutions. For the year 1903 these are: Burke's Speech on Conciliation with America; Carlyle's Essay on Burns; Coleridge's Ancient Mariner; the Sir Roger de Coverley Papers; Goldsmith's Vicar of Wakefield; George Eliot's Silas Marner; Lowell's Vision of Sir Launfal; Macaulay's Essays on Milton and Addison; Milton's Minor Poems, Lycidas, Il Penseroso, Comus, and L'Allegro; Scott's Ivanhoe; Shakespeare's Julius Cæsar, Macbeth, and Merchant of Venice; and Tennyson's Princess.

The history of this year relates to the United States, and covers the entire period. Both Johnston's and Channing's text-books are used, much written work and collateral reading are secured, and maps are carefully studied and reproduced. Some attention is paid to the study of sources. Skill in selection is trained by topical work; skill in judgment, by the institution of comparisons and the search for causes; skill in expression, by the acceptance of none but well written papers or recitations made in correct form.

The reviews in algebra and plane geometry are designed to cover, by the use of a fresh and harder text-book, the entire requirement in these subjects for admission to the higher institutions, so that those who are successful in them shall be adequately prepared for the preliminary examinations.

In the domestic science course, the distinctive subject for this year is food and its preparation. In this subject the following topics will be treated by familiar talks and illustrated by practical work: A. *Food*: classification of food substances according to chemical composition; the use of each class in the body; food value of the various classes compared; cost of the various classes compared; experiments testing the foods for albumen, casein, gluten, starch, fat, etc.; others illustrating the action of yeast and baking powders; still others showing the effect of heat on the digestibility of different foods; the manufacture of the different food substances; marketing lessons with visits to Quincy Market, the chocolate factory, and elsewhere; study of food adjuncts, condiments, tea, coffee, etc. B. *Chemistry of Cooking*: various methods of cooking foods; advantages of each method; principles of cooking; practical application of the principles involved in the cooking of the various food substances. C. *Practical Cooking*: cooking of proteids (eggs, milk, cheese, fish, meat, gelatine, peas, beans, etc.); cooking of carbohydrates (cereal foods, tapioca, vegetables, macaroni, sugar, etc.);

cooking of fats (cocoa, chocolate, preparation of salads, use of fats for soap); study of fermentation, and the use of yeast in making the various raised breads; study of baking powders, soda and sour milk or molasses, and their use in making biscuits, ginger bread, cake and muffins. D. *Serving of Food*: duties of the waitress; care of the dining room; serving of breakfasts, luncheons, and dinners. E. *Chemistry of Cleaning* (weekly through the year): (1) The Kitchen and its Equipment: selection and care of cooking utensils; care of the sink and sink plumbing; selection and care of the range; advantages of different fuels; selection and care of the refrigerator. (2) Essentials of Cleanliness: care of food; disposal of garbage; care of dish towels, etc.; cause of tarnish and the removal of it from iron, tin, zinc, brass, copper, aluminum, steel, nickel, and silver; care of the glass, china, and table linen; cleaning of unfinished and finished woods; cleaning of rugs, carpets, and matting. (3) The Manufacture of Cooking Utensils: glass, silverware, etc.; visits to the glass factory.

FOURTH YEAR.

The Latin of this year includes Virgil's *Æneid* and Cicero's Orations.

The English embraces practice in composition, some instruction in the principles of rhetoric, the critical reading of several works, and a survey of the field of English literature. This survey is necessarily brief, but aims to note the more prominent writers and productions in right relations one to another and in their proper historical environment. The works read are: Arnold's *Sohrab and Rustum*; Carlyle's *Essay on Burns*; Emerson's *American Scholar*; George Eliot's *Silas Marner*; Macaulay's *Essays*; parts of Milton's *Paradise Lost*; Scott's *Woodstock*; Selections from *British Masterpieces*; Shakespeare's *As You Like It*, *Macbeth*, *Midsummer-Night's Dream*, and *Twelfth Night*; and Tennyson's *Princess*. The English for the pupils preparing for higher institutions is confined more narrowly to the requirements for admission for the given year.

The advanced mathematics will for the present include solid geometry and advanced algebra, in preparation for the final examinations at the higher institutions.

The history for this year is that of the United States. Those pupils electing history who have taken the course prescribed for the previous year in this subject will devote themselves with much care and thoroughness to the detailed study of a limited period within the history of this country, in which the general methods previously described will be carried as far as the capabilities of secondary students and the time at

their disposal shall permit. The pupils preparing for higher institutions will also review their English history.

The classes in conversational French and German are designed to freshen and extend the knowledge in those subjects obtained by earlier study.

The work in descriptive economics, commercial history, and geography will aim to show the pupils of the commercial course the leading facts in the economic history of the United States, to interest them in economic problems, and to help them to apply the principles of economics to commercial life.

The subject of civics is treated both historically, with the use of Fiske's Civil Government, and practically, by constant reference to documents, actual experience, and observation.

In the domestic science course attention is given to advanced cooking and household hygiene with the following list of topics as a guide: A. *Advanced Cooking*: cooking of vegetables; vegetable soups; fruits and fruit desserts; cake; frying of fish; vegetables, croquettes, doughnuts, etc.; frozen dishes; jellies, preserves, and pickles. B. *Bacteriology*: study of bacteria, yeasts, and molds; practical application in preserving fruits and vegetables, in the care of the sickroom, in the care of plumbing, and in the use of disinfectants. C. *Physiology of Digestion*: practical applications in lessons in cooking for invalids. D. *Home Nursing*: location and furnishing of the sick room; care of invalids. E. *Sanitation*: study of soils and building location; draining of soil; building of the house; study of methods of lighting, heating, and ventilation; study of plumbing; care of plumbing; construction of the cellar; planning of different rooms; furnishings of the house; the essentials of an ideal home. F. *Home Expenses*: planning of ménus with cost per head; estimate of household expenses.

Music and drawing are regarded as important branches of the course of study. There is a weekly exercise in choral singing, required of all, in addition to the daily opening exercises which include singing. In the third year there is an optional class in harmony, and in the fourth year a similar class in counterpoint and melodic construction, each with lessons twice a week. These are designed especially for pupils who intend to become teachers. Besides the required drawing of the first year, an optional class is formed open to pupils of the three later years.

While the studies of the English high school are selected and arranged with main reference to the wants of those who are not to enter college, pupils of good capacity need only to supplement these studies by a moderate amount of outside work to gain admission to such colleges as offer courses that do not include Greek. In this way several graduates of

the school have entered college and are maintaining an honorable standing there. The second of the four regular courses also leads directly to the scientific schools.

RINDGE MANUAL TRAINING SCHOOL.

This school was founded by Mr. Frederick H. Rindge in 1888. For ten years he paid the current expenses of the manual training department, the city providing for the academic instruction. January 1, 1899, a complete transfer of the entire plant was made to the city, and the school became an integral part of the school system.

The following table shows the membership of the manual training school and the cost of instruction for three years : —

Year	Average Number of Pupils	Number of Teachers in December	Cost of Instruction	Cost per Pupil	Number of Graduates
1900	192	14	\$17,825 73	\$92 84	16
1901	191	14	17,988 33	94 18	21
1902	242	15	19,108 67	78 96	23

The cost of the manual training school to the city is less than the above sums by the amounts received from Harvard University for the instruction of a class of students during the summer vacation, and for the tuition of non-resident pupils. The amount received this year from both sources was \$4,654.

The course of instruction covers four years. The sessions are five and one-half hours a day, instead of five, as in the other high schools. About one-third of the time is given to the work of manual training, and the remainder to the subjects usually taught in high schools, with the exception of Latin and Greek.

The requirements for admission to this school and the rules relating to the granting of diplomas are the same as for the Latin school.

For non-resident pupils, the tuition is \$150 a year, payable in advance,—one-half at the beginning, and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 2 P. M.

The following is from the report of the head master of the Rindge manual training school : —

The completion of the Washington school building, and the assignment of four rooms to this school, has been the most important event of the year.

Daring the past six years we have steadily increased in numbers. Six years ago we registered one-third of the boys who graduated from the grammar schools and entered the high schools. Last September more than one-half of the boys who entered the high schools came to this school. Our increase this year over the numbers a year ago is 17 per cent. I regret that so many parents fail to grasp the fact that this school offers the best advantages to young men intending to enter the Massachusetts Institute of Technology or the Lawrence Scientific School.

An increase in our machine shop equipment will be necessary, that we may provide for the second class the latter half of this year. An increase in our pattern shop facilities is also necessary. We have lost several able teachers during the past few years, due to the fact that our salaries were not as large as those offered by other cities.

The cost per pupil for this school is of necessity larger than for a purely academic high school, but the demand for our graduates at comparatively large pay indicates that the public looks with favor upon the training received.

COURSE OF STUDY FOR THE RINDGE MANUAL TRAINING SCHOOL.

FOURTH CLASS. (TENTH GRADE.)

GENERAL COURSE.	Hours per Week.	Months per Year.	COLLEGE COURSE.	Hours per Week.	Months per Year.
Algebra	5	10	Same as General Course.		
English	5	10			
English History }	3	10			
Physiology }	3	10			
Supervised Study.....	2	10			
Drawing }	10	10			
Shop Work }	10	10			
Study	5	10			

THIRD CLASS. (ELEVENTH GRADE.)

French	5	10	Same as General Course.		
Geometry.....	3	10			
English	2	10			
Drawing.....	5	10			
Shop Work.....	10	10			
Study.....	5	10			

SECOND CLASS. (TWELFTH GRADE.)

GENERAL COURSE.	Hours per Week.	Months per Year.	COLLEGE COURSE.	Hours per Week.	Months per Year.
Physics	5	10	Algebra, Geometry....	5	10
French.....	5	10	French	5	10
English }	5	10	English }	5	10
History }			History }		
Drawing }	10	10	Drawing }	10	10
Shop Work }			Shop Work }		
Study	5	10	Study	5	10

FIRST CLASS. (THIRTEENTH GRADE.)

Chemistry.....	5	10	Advanced French.....	5	10
Physics	3	10	English }	5	10
Civil Government.....	2	10	Solid Geometry }		
English	5	10	Physics	10	10
Drawing }	10	10	Shops (alternate days)	5	10
Shop Work }			Drawing (elective) } ..		
Study	5	10	Study } ..	5	10
			Chemistry } ..		

An effort is made to give proper emphasis to the academic features of the course, and to make that work interesting and effective by bringing it into intimate relation with instruction in the mechanic arts.

The manual dexterity and the thorough knowledge of tools, machinery, and mechanical processes acquired in the shops, at an age when time can be most easily spared for such training, is of inestimable value in any scientific pursuit.

At the beginning of the third year a choice is offered between the college course designed for boys fitting for higher scientific schools and the general course for those who do not intend to enter the higher schools. The work of the college course is arranged to meet the requirements for admission to the Massachusetts Institute of Technology and the Lawrence Scientific School.

MANUAL TRAINING IN OTHER SCHOOLS.

The statutes require that every town and city of twenty thousand or more inhabitants shall maintain, as part of both its elementary and its high school system, the teaching of manual training. The Rindge manual training school gives the required instruction to boys of the high

school grade, and provision is made in the English high school for girls of this grade, sloyd being taught in the second year, and cooking in the third. Sewing in the grammar schools may be considered as meeting the requirements for girls in the grammar grades.

The requirements that manual training shall be taught in elementary schools as well as in high schools has not been fully complied with. Provision has been made for the teaching of this subject in only three of the grammar schools — the Putnam, the Roberts, and the Wellington. When the schoolhouse on Willow street is completed, provision can be made for the Allston school. Now that the Washington school is so closely connected with the Rindge manual training school, arrangements could be made for the pupils of that school to use the benches at the manual training school building on afternoons between the hours of two and four, there being no afternoon session at the manual training school.

At the Harvard school there is an unoccupied room in the basement which might be used for a class in manual training. The superintendent hopes that in the near future provision will be made for the teaching of manual training in all the grammar schools, as required by statute. The work of manual training in all the schools is under the direction of the head master of the Rindge manual training school.

WELLINGTON TRAINING SCHOOL.

This school was opened in September, 1884, and differs from the other schools in this respect, — all the grades, except the eighth and ninth, are taught by young teachers. Their work, however, is done under the immediate supervision of a master and three assistants, who are held responsible for the instruction and management of the school. For several years the seventh grade has been taught by a graduate of the training class.

The object of conducting a school on this plan is to give Cambridge young women who desire to teach, and who have made special preparation for the work, an opportunity to gain experience under conditions favorable to their own success, and without prejudice to the interest of their pupils.

Graduates of the English high school or of the Latin school, who have also graduated from one of our state normal schools, are preferred candidates for the position of teacher in this school. Other persons of equal preparation may be appointed.

The required term of service is one year. Teachers are appointed on probation, and may be excused or dismissed at any time by the superintendent, with the approval of the committee on the training school.

No teacher is considered a graduate of the school until by vote of the training school committee she is admitted to the graduate class, which is known as Class B.

The money compensation for the first three months, and until satisfactory service is rendered, is at the rate of two hundred dollars a year. For the remaining part of the year it is at the rate of two hundred fifty dollars.

Graduates temporarily employed as teachers in this school are paid at the rate of three hundred dollars a year. Graduates selected to act as substitutes in any school are paid at the rate of four hundred fifty dollars.

That the direct influence of the school may be continued, it is the duty of the master, or of one of the supervising teachers, occasionally to visit the schools of the graduates who are teaching in Cambridge. The school contains all the grades of the grammar and primary schools and a kindergarten.

By the rules of the school board the superintendent is authorized to employ as many substitutes and temporary teachers as may be necessary to take the places of absent teachers. These teachers are usually assigned to the training school, when not otherwise employed, that there may be at this school a sufficient number of teachers to make it practicable for the members of the training class to visit other schools.

The following is from the report of the committee on the training school : —

The general conditions of the school remain about the same as they were last year. Over one thousand children have been enrolled and have been cared for in the Wellington buildings, with the exception of one class, which was sent to the Merrill school. The great majority of the graduates of the training class have found positions in the schools of Cambridge. At the present time nearly fifty per cent of the teachers in our grammar and primary schools, not including those in the Wellington, are graduates of this school. Recently several of these graduates have been called to Boston.

The committee is pleased to report that the long expected school-house on Willow street is in process of erection. When it is completed, the crowded condition of the Wellington school may find relief.

GRAMMAR SCHOOLS.

The number of pupils in these grades on the first of December was six thousand eight hundred ninety-eight, and the number of teachers including masters and special teachers, was one hundred seventy-nine.

The cost of instruction for each pupil for the year has been \$20.52. This does not include the cost of supervision or the cost of the Wellington school.

For non-resident pupils the tuition is \$30 a year, payable in advance, — one-half at the beginning and the other half at the middle of the school year.

The course of study is for six years, but the schools are so classified as to give the pupils an opportunity to complete the course in four years or in five years. The average age of those who entered last September was nine years nine months. The number of graduates was five hundred sixty-five, their average age being fourteen years eleven months. Of these, 6 per cent completed the course in four years, 28 per cent in five years, 50 per cent in six years, and 16 per cent in seven years or more.

Pupils are promoted by classes from the primary schools at the beginning of the autumn term; but individual pupils may be promoted at other times, if it is deemed expedient by the supervisor of primary schools and the superintendent.

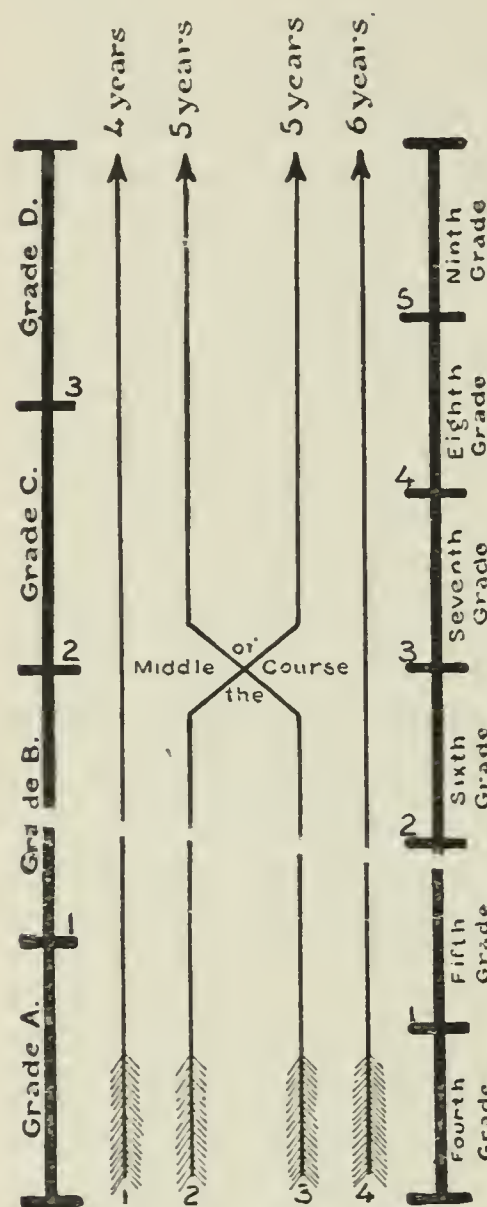
Promotions from grade to grade in the grammar schools, and from the grammar to the high schools, are made by the teachers under the direction of the masters and the superintendent. Pupils qualified to join existing classes may be admitted at any time on application to the master of the school. No regular pre-announced examinations are held in these schools, but the results of such written exercises and reviews as the teachers and masters may require from time to time may be used as a part of the basis of promotion.

The thoroughness with which the work is done in any school is shown in part by the ability of the pupils to do the work in the high schools. The pupils are admitted to the high schools on trial; and, by the rule of the high school committee, any pupil who fails to maintain a suitable rank is reported to that committee, and no pupil thus reported can continue in either high school, except by special vote. For two years, however, provision has been made by which these pupils have been allowed to remain in the English high school, and receive such instruction as would best fit them to enter again upon the regular work of the school at its reorganization in September.

In the grammar schools special teachers are appointed to help such pupils as seem able to do the work in less than six years, and to aid those who without personal instruction would require more than six years. This action of the committee removes the most serious objection to the graded system of schools.

The course of study is divided in two ways: (1) into six sections; (2) into four sections; each section covering a year's work. Pupils taking

the course in six years are classified in six grades, called the fourth, fifth, sixth, seventh, eighth, and ninth grades. Those taking it in four years are classified in four grades, called grades A, B, C, and D. When pupils are promoted to the grammar schools they begin the first year's work together. After two or three months they are separated into two divisions.



One division advances more rapidly than the other, and during the year completes one-fourth of the whole course of study. The other division completes one-sixth of the course.

During the second year the pupils in grade B are in the same room with the sixth grade. At the beginning of the year they are five months (one-half the school year) behind those in the sixth grade. After two or three months, grade B is able to recite with the sixth grade, and at the end of the year both divisions have completed one-half the course of study — the one in two years, and the other in three years. The plan for the last half of the course is the same as for the first half, the grades being known as the seventh, eighth, and ninth in the one case, and as C and D in the other.

There are also two ways of completing the course in five years: (1) any pupil who has completed one-half the course in two years may at the end of that time be transferred to the seventh grade, and finish the course in three years; (2) any pupil who has completed one-half the course in three years may at the end of that time be transferred to grade C, and finish the course in two years. In both cases these changes can be made without omitting or repeating any part of the course.

It is now eleven years since the schools were first classified on this plan. During this time five thousand nine hundred twenty-six pupils have graduated from the grammar schools. Of this number 8 per cent completed the course in four years, 29 per cent in five years, 48 per cent in six years, and 15 per cent in seven years or more.

Of the number who entered the Latin school during the past eight years, 16.3 per cent did the work in the grammar schools in four years,

Arrow No. 1 indicates the four years' course; grades A, B, C, D. Arrow No. 2 indicates one of the five years' courses; grades A, B, 7, 8, 9. Arrow No. 3 indicates the other five years course; grades 4, 5, 6, C, D. Arrow No. 4 indicates the six years' course; grades 4, 5, 6, 7, 8, 9.

46.4 per cent in five years, and 37.3 per cent in six years. Of those who entered the English high school and took the general course, 10.7 per cent did the work in the grammar schools in four years, 41.2 per cent in five years, and 48.1 per cent in six years: of those who took the commercial course in the English high school, 8.6 per cent did the work in the grammar schools in four years, 37.8 per cent in five years, and 53.6 per cent in six years. Of those who entered the Rindge manual training school, 6.5 per cent did the work in the grammar schools in four years, 36.1 per cent in five years, and 57.4 per cent in six years.

During the past eight years, more than 50 per cent of the pupils entering the high schools did the work in the grammar schools in less than six years, 41.2 per cent doing it in five years, and 11.3 per cent in four years. It does not follow, however, that because so many did the work in less than the full time, the plan is a good one. Its value is shown rather, by the thoroughness with which the work has been done, not in one year only, but in a series of years. The results of the first year's work in the high schools would seem to be a test of this thoroughness. The records in these schools show that for eight years the average per cent of the pupils who were four years in the grammar schools was higher than for those who were five years in the grammar schools, and that the per cent of those who were five years in the grammar schools was higher than for those who were six years in the grammar schools.

The average per cents of the first year's work in the different high schools for eight years are as follows:—

In the Latin school, the average per cent of the pupils who completed their grammar school work in four years is 79.7; of those who completed it in five years, 75.1; of those who completed it in six years, 70.6.

In the general course of the English high school, the average per cent of the pupils who completed the grammar school work in four years is 78.4; of those who completed it in five years, 75.7; of those who completed it in six years, 73.1.

In the commercial course of the English high school, the average per cent of the pupils who completed the grammar school course in four years is 73.5; of those who completed it in five years, 72.1; of those who completed it in six years, 70.3.

In the Rindge manual training school, the average per cent of the pupils who completed the grammar school work in four years is 77.3; of those who completed it in five years, 68.2; of those who completed it in six years, 67.3.

The following tables will be of interest as showing the results of the first year's work in the high schools of eight classes:—

IN THE LATIN SCHOOL.

RECORD OF EIGHT DIFFERENT CLASSES	FOUR YEARS IN GRAMMAR SCHOOLS	FIVE YEARS IN GRAMMAR SCHOOLS	SIX YEARS IN GRAMMAR SCHOOLS
First Year in High Schools	Average per cents in High Schools	Average per cents in High Schools	Average per cents in High Schools
Class of 1895.....	78.7	78.9	76.4
Class of 1896.....	80.4	77.0	71.6
Class of 1897.....	79.3	72.5	66.9
Class of 1898.....	77.1	72.3	67.8
Class of 1899.....	80.0	73.0	61.8
Class of 1900.....	81.1	75.9	75.4
Class of 1901.....	79.6	75.2	70.1
Class of 1902.....	81.0	77.5	74.7

IN THE ENGLISH HIGH, GENERAL COURSE.

Class of 1895.....	77.3	76.2	73.4
Class of 1896.....	85.9	75.1	76.4
Class of 1897.....	79.7	78.7	72.2
Class of 1898.....	77.6	75.8	77.0
Class of 1899.....	75.6	75.1	69.1
Class of 1900.....	79.2	73.4	71.1
Class of 1901.....	72.8	75.2	73.2
Class of 1902.....	82.2	75.3	74.3

IN THE ENGLISH HIGH, COMMERCIAL COURSE.

Class of 1895.....	73.7	73.5	69.8
Class of 1896.....	74.8	70.9	68.4
Class of 1897.....	76.3	69.0	69.3
Class of 1898.....	75.7	73.8	69.5
Class of 1899.....	69.5	68.5	68.9
Class of 1900.....	69.2	73.6	72.5
Class of 1901.....	76.0	73.6	70.5
Class of 1902.....	74.9	75.5	73.3

IN THE MANUAL TRAINING SCHOOL.

Class of 1895.....	72.6	65.4	65.9
Class of 1896.....	79.3	63.5	65.2
Class of 1897.....	78.6	67.2	61.7
Class of 1898.....	81.7	69.5	68.9
Class of 1899.....	....	67.5	67.8
Class of 1900.....	72.6	69.6	68.0
Class of 1901.....	80.0	67.8	68.4
Class of 1902.....	80.4	71.9	69.2

The results already given are based on the first year's work in the high schools. For the second time results have been obtained based on the full course in the high schools. Last June sixty-two pupils were graduated from the Latin school. Of this number, forty-five were graduates of the Cambridge grammar schools. Of these forty-five, five did the work in the grammar schools in four years, and their average per cent for the Latin school course was 83.2; twenty-seven did the work in the grammar schools in five years, and their average per cent for the Latin school course was 77.0; twelve did the work in the grammar schools in six years, and their average per cent for the Latin school course was 76.3; one was seven years in doing the work in the grammar school, and her average for the Latin school course was 66.7.

Eighty-six pupils were graduated from the English high school last June. Of this number, seventy-six were graduates of the Cambridge grammar schools. Of these seventy-six, nine did the work in the grammar schools in four years, and their average per cent for the high school course was 75.7; twenty-seven did the work in the grammar schools in five years, and their average per cent for the high school course was 75.1; thirty-four did the work in the grammar schools in six years, and their average per cent for the high school course was 74.7; six were seven years in doing the work in the grammar schools, and their average per cent for the high school course was 74.3.

These results do not indicate as thorough preparation for high school work as is desirable, but they do show that there are some pupils who can do the same amount of work as others in less time, and do it as well or even better. If it is said that the pupils who spent only four or five years in the grammar schools should have remained longer, it would be equally true that the time should have been lengthened for those who had been in these schools six years.

PRIMARY SCHOOLS.

The number of pupils in these grades on the first of December was five thousand eight hundred twenty-five, and the number of teachers was one hundred forty.

The cost of instruction for each pupil for the year has been \$16.95. This does not include the cost of supervision or the cost of the Wellington school.

For non-resident pupils the tuition is \$20 a year, payable in advance,—one-half at the beginning and the other half at the middle of the school year.

The course of study is for three years. Children five years old are

admitted to the first grade at the beginning of the school year and during the first week in March. Pupils qualified to join existing classes may be admitted at any time on application to the principal. At the present time, 41 per cent of the pupils are in the first grade, 31 per cent in the second, and 28 per cent in the third.

One thousand four hundred sixty pupils graduated last June at an average age of nine years six months. Of these, 5 per cent completed the course of study in less than three years; 62 per cent in three years; 4 per cent in three years and a half; and 29 per cent in four years or more.

Promotions from grade to grade in the primary schools, and from the primary to the grammar schools, are made by the primary teachers, under the direction of the supervisor of primary schools and the superintendent. Promotions by classes are made annually at the beginning of the autumn term; but individual promotions are made at other times if it is deemed expedient by the supervisor of primary schools and the superintendent.

Pupils are promoted to the grammar schools on trial, and those who show by their work that they are unprepared are returned to the primary schools on the approval of the supervisor of primary schools and the superintendent.

Once a month the teachers of each grade meet the directors of special studies and the supervisor of primary schools. These meetings are held in the English high school building on Wednesday afternoons, half an hour after the close of the schools. The work for the coming month is planned; criticisms and suggestions in regard to methods are made; and questions from the teachers are answered and discussed.

Occasionally specimens of written work from all the pupils are brought for examination. In this way the amount of work done in the schools is made somewhat uniform; new teachers are kept informed as to the requirements, and pupils lose less time when a change of teacher or school becomes necessary.

The supervisor of primary schools writes in regard to primary reading, absences from school, and the stamp savings system, as follows:—

While realizing the value of the grade reader in the systematic teaching of a vocabulary, there is a growing feeling that the mechanics of reading can be taught with the aid of a few carefully selected readers, and that more time should be spent in the reading of books which give special information or have a claim to be classed as standard literature. Single sets of such books have been placed in the primary schools for the use of any grade or group of children who have acquired the power to read them with profit.

A careful study of the conditions which prevent children, in spite of faithful teaching, careful grading, and every facility for individual promotion, from completing their primary course in three years, shows that a large number of those who fail of promotion have lost time in the first grade by frequent absences during the year, which are not due to contagious diseases or to those common to childhood. Another cause may be the large number of children over ten years of age in the second or third grade whose necessities seem more urgent than those of the younger children, and who, for this reason, take most of the time which the teacher can spare for individual instruction. Were some way provided by which these children, who are too old for the associations of the primary grades, could be taught in ungraded classes, much time would be saved for the benefit of the younger children. The best remedy would be for parents to realize the importance of a year in the early part of a child's life. It counts for as much time as in the higher grades. "There are bricks at the top of the tower, there are bricks at the bottom of the well — yet both are bricks."

A system of stamp savings in connection with the schools was begun in May, 1897. There are at present nine stations in the primary and grammar schools, with a sub-station in one of the kindergartens. During this time there have been five thousand five hundred depositors, of whom one thousand five hundred fifteen still remain on the lists. The deposits aggregate \$7,355.98, of which \$1,437.91 has been added this year.

Much of the money is withdrawn before the end of the year, but usually for necessary expenditures sanctioned by the parents. The capital required to care for these stations has been furnished by various organizations and individuals, and the collections are made by members of a committee who work directly with the children.

The chairman of the committee on stamp savings, Miss M. L. Drew, writes in her report as follows: —

It is the first aim of the committee that the stamp savings work shall lay no additional burden upon the teachers, but rather that, while serving the children directly, it shall add something of interest to school attendance, and help indirectly in the order of the schoolroom. It is interesting to note how important a part the personal element plays in this work, especially the personal enthusiasm and encouragement of the teacher. By a careful comparison of actual figures, it is found that where, for one reason or another, the regular routine is disturbed, there the interest among the little savers lags and savings grow less. On the other hand, if an interested teacher occasionally reminds his children of "bank day," or speaks an approving word on the project, or himself saves with the children, increased returns are sure to follow.

KINDERGARTENS.

There are fourteen kindergartens. The number of pupils on the first of December was seven hundred twenty-two, and the number of teachers was twenty-five.

The cost of instruction for each pupil for the year has been \$26.17. This does not include the cost of supervision.

The following in part is from the report of the committee on kindergartens : —

Miss Harriette E. Ryan, principal of the Shaw kindergarten, has been granted a year's leave of absence for study, and Miss Leonice S. Morse, the assistant, is acting principal. Miss Della E. Cabot has been appointed assistant for the school year. Mrs Ellen A. Watson resigned from the Willard kindergarten and Miss Alice V. McIntire, who had been acting as principal, has been appointed to the position. Miss Anna M. Gage has been made assistant.

To be eligible to the position of teacher in a kindergarten a person must now have had a course in a high school, a course in a kindergarten normal school, a year's experience in teaching in a kindergarten or a primary school, and must be able to play the piano.

To meet the new requirements of a year's experience, a class of kindergarten graduates was received as members of the Wellington training school, and placed in the first primary grades and kindergartens in other schools to help the regular teachers, and to act as substitutes when needed in the kindergartens.

The number of applicants for positions in kindergartens far exceeds the number of places to be filled. An opportunity is now given for kindergartners to get experience in primary work and thereby become eligible to an appointment to the first grade of a primary school.

Students in kindergarten normal classes are given opportunities to observe during their two years' course, and are allowed one month's experience in the first primary grade, but it is not deemed expedient for them to observe after graduation.

Teachers in kindergartens are to use their afternoons in visiting the homes of their pupils, with a view of maintaining friendly relations with the parents and of securing regularity of attendance, except when the time is needed for preparation for their work, and they are to make monthly reports on blanks prepared for the purpose. The average number of visits made by both principal and assistant to homes of children is about one hundred fifty.

There is special need of a new kindergarten in the Parker school. This school is cut off from the rest of the city by the tracks of the Grand

Junction R. R., and many mothers who would send their children as far as the distance to the nearest kindergarten, fear the danger of the crossings.

The number of children on the waiting list of our several kindergartens is so large that the committee deem it wise and expedient to hold afternoon sessions in two of the kindergartens already established.

The mothers' clubs are so well established that some of them are seeking to extend their work. The club connected with the Riverside school and kindergarten supported last summer a vacation kindergarten for four weeks. Another club interested itself in the school for crippled and deformed children; and all the clubs show in many ways the deep interest which they feel in the welfare of the kindergartens with which they are associated.

The Cambridge kindergarten association, composed of the kindergarten teachers, meets once in two months. At each meeting a paper is read on some important educational subject.

The following taken from the report of the Board of Education to the commissioners of the District of Columbia, will be of special interest to those who are seeking information in regard to the scope and purpose of the kindergarten system : —

“It is vastly important that the child at a period when impressions are most vital and lasting should see life not as so many detached wholes — a little piece here, another unrelated there — but as one great whole, made up of members interdependent and interrelated.

The kindergarten programme begins with the family, the first institution into which the child enters, and leads out from the known to the unknown. From the human family it is but a step to its natural analogue, the families of a lower order in nature, and the child sees his own life reflected in the nurturing care of the mother bird for her young. He is led to notice the different kinds of homes in nature. Various nests are brought into the kindergarten and seed homes of many kinds. Songs, stories, games at this time relate to the family and to the child's new experience of separation from and return to his home. No conscious appeal is made to the child which would force these thoughts home by any well-drawn comparison. He is left to draw the conclusion himself, to perceive that families and groups exist in nature and that each created thing has its appointed place of habitation. From the family we lead out into the larger whole, the great institution of labor or civil society, relating this institution to the former, for it is here that we find the helpers of the family. Under this head are presented the activities of the working world which touch the child's life and which are therefore of interest to him. Farmer, miller, and baker are presented in turn, and the children

have the actual experience of making butter and bread and of visiting a bakery. At Thanksgiving they are taken to the market, that they may see the bounty of nature, the fruits of man's industry, how each is working for all and all for each. In each kindergarten room this year a corner was arranged with fruits, grain, and autumn flowers, and thus the simple Thanksgiving hymn was full of richest meaning and a real feeling of gratitude stirred toward God, the giver of all. An opportunity to become a bestower as well as a receiver of gifts is given by the Christmas festival, when each child makes a simple offering of his own work for those in his home.

After the holidays the new year itself is made the point of departure, and inasmuch as the new year is a period when new resolutions are formed, we lift up into a conscious place the virtues of punctuality and order, virtues which are distinctly necessary for the preservation of the social order and which arise out of that relationship.

As the mission of the kindergarten is to awaken the elementary ideas and affections and to arouse the impulse to work from within, we do not wish the children to see order as an iron rule, external, compulsory, but as the 'kindly law which guides the universal round.'

Children are never allowed to be tardy in kindergarten. There is a stated time for each exercise. Materials are always ready for use before the children assemble, and in every detail, however small, they are led to observe 'the reign of order.'

As light is the great revealer of order in the universe, and as the heavenly bodies mark the divisions of time, we next present the songs of light, the sun, the moon, and stars.

No abstract astronomical facts are taught. Questions are answered correctly, so that false ideas may be dispelled and the children started along the paths of accurate thinking. Our object is to stir the wonder, the interest; to stimulate the desire to know; to give seeing eyes.

February, with its birthday of our national hero, gives us the State for our point of departure, and our programme begins with those who render lowly service and leads up to the personal hero, George Washington. It includes the knight or ideal soldier; soldier games and songs; flag songs, and, whenever possible, a visit to the Capitol, that the children may feel the greatness of our country under its wide-spreading dome. They learn to love the flag and to carry it with care; patriotic stories and exercises are given, and thus the germ of truest citizenship is implanted.

The spring months are filled with the glad awakening of life, which is shown by varied illustrations and from many different standpoints. The awakening of the butterfly, the birth of the seeds, the return of the

birds and nest building, and the growth and evolution of life everywhere. Through the doorway of this returning life in nature, which finds its highest expression in the festival of Easter, we reach the climax of our programme in the song and old-fashioned picture of the church, taken from Froebel's Mother Play. This picture is supplemented by modern illustrations of churches and cathedrals, furnished by the teachers or brought by the children.

The weeks which follow complete the cycle of the year's programme by returning to the thought of the home in the nest building of the birds, the work of the carpenter or home builder, and finally closes with the making and furnishing of tiny homes by the children.

From this necessarily brief sketch it will be seen that the work of the year is an organic whole and the outline plan logically related to this whole; that the daily programme is not a hit or miss scheme of teaching or amusing children too young for the primary grades, but that it is the result of definite, carefully prepared lessons, intended to develop a comprehensive, educational plan."

SPECIAL STUDIES.

The committee on special studies has the supervision of the instruction in nature study, drawing, music, physical training, and sewing.

NATURE STUDY.

The work in nature study includes the study of plant and animal life with some study of minerals and of weather phenomena.

The study of plants was first undertaken, and still makes up the larger part of the work. The study of animal life consists mainly of lessons on insects and birds. The mineral work is confined to lessons on common metals and on building stones.

Plants are studied in grades one to four inclusive; insects in grades one and two; birds in grades three and four; weather phenomena in grades one to three inclusive; and minerals in grade four only.

Specimens chosen for study are those in which the pupils have a present interest, and all work is based on present experience. It is kept well within the capabilities of children, yet novel enough to require their best effort. Wherever it can be made to blend with other lines of school work, this is done.

The results sought are increasing knowledge of facts gathered by observation: familiarity with environment; and a growing sympathy with nature.

The following is from the report of the director of nature study to the supervising committee:—

One year ago the course in nature study was revised to meet new conditions and new requirements. The course as revised has been used unchanged this year.

In September the pupils of the first grade studied the wild flowers which they were able to find; in October, the autumn leaves; in November, the fruits found in near-by markets; in December, the evergreens. These gave place in the spring to buds and seeds, and later to the early wild flowers.

The second grade reviewed and extended the work of the first year, finding new specimens and new facts in regard to them.

The third grade was able to do more thoughtful work, grouping and comparing the specimens studied. In the grammar grades some study of minerals during the winter, and of birds and their nests in spring and fall was introduced.

All lessons have been arranged with reference to the changing seasons, and all specimens used have been those appropriate to the time of year. In each month, one thought has been made a centre about which to group all the lessons of the month. This thought changes with the grade, so that there is no sameness in the work. Each lesson is based on one that has been given, and leads up to one that is to follow. There is, therefore, a sequence and a grading in the work.

Efforts are made to bring material for nature study nearer to the pupils in their home and school life. Plants growing in the schoolrooms, window boxes at the windows, and gardens in the school yard are helps toward this end. The habit of examining specimens is being formed in the pupils. Even in the entering classes we find evidences of work done in imitation of older brothers and sisters. More voluntary work outside of school is undertaken. There has been a marked increase in the number of gardens planted and cared for at home, and in the number of specimens brought in after a country visit. Much of the best work has been done by classes that have been taken out of doors for their nature lessons. The number of such classes has been increased each year. The habit of studying and enjoying nature is becoming fixed among the pupils.

DRAWING.

The course of instruction in drawing in the primary and grammar grades includes, form, color, and designing.

The study of form, by means of type models and drawing, is begun

in the first primary year, and is succeeded in the grammar grades by object drawing, drawing with instruments, and drawing from nature. This last subject receives especial attention during the spring and autumn months.

Color is studied in all the grades, colored tablets being used in the primary grades and water colors in the grammar grades. Harmony and mixing of colors are treated as a science in special exercises; while color skill is artistically expressed in original designs, historic ornament, and nature study.

In design, attention is given both to construction and decoration, embracing a large variety of subjects.

In the English high school, drawing is a required study the first year, and is carried forward upon a plan of which the following is an outline:—

Drawing from objects and from casts, drawing from nature of plant form, drawing to scale, designing (constructive and decorative), and color harmony.

Drawing, designing, or water-color painting, may be taken as an elective study after the first year. The course of lessons includes landscape, still-life, and advanced designing.

In the English high school, the instruction in drawing is given by the director of drawing and his assistant. In the primary and grammar grades, it is given by the teachers under the supervision of the director and his assistant.

In the Rindge manual training school, there are two teachers of drawing, one of mechanical drawing, and the other of free-hand, and the work is done under their immediate instruction.

The following is from the report presented by the committee on special studies:—

Mr. Roos, director of drawing, reports that since the Board abolished the use of drawing books, there has been a steady development in practical exercises in form drawing, in color study, and in correlated drawing and designing. That the present course is well adapted to the growing powers of the children is proved by the work shown in the schools and school exhibitions. The teachers have without exception labored intelligently and faithfully to make the work a success.

He recommends that in the new schoolhouses, and, if possible, in those now in use, a room on the upper floor having ample light from one direction, preferably from the north, shall be set apart for drawing for all the classes in the school, and that here may be gathered specimens illustrating art, with instruments and materials to be used in this branch of study.

Mr. Roos meets a class of teachers for art study at the English high school every Monday evening during the time of the sessions of the evening schools. The class numbers sixty-two this year, an increase of nine over last year. This furnishes opportunity for improvement in methods of instruction. He recommends that a diploma be given to members of this class on the completion of prescribed courses.

The committee calls attention to the admirable course in art study prepared by Mr. Roos by means of the cyclostyle, and furnished to the teachers almost without cost to the city. A copy of this course can be seen at the office of the secretary of the Board.

The director of drawing not only supervises the work of the evening schools but is present during the sessions of these schools. Miss Lucia N. Jennison, assistant in drawing, supervises the work in the primary schools, and teaches classes in the English high school Wednesdays and Thursdays.

MUSIC.

Instruction in music by the National or Mason system is given by the regular teachers in the primary and grammar grades under the supervision of the director of music and his assistant. In the high schools it is given by the director. Every pupil who is capable of learning to sing is required to give attention to the subject.

In the Latin school and English high school, forty-five minutes a week are given to the study of musical form and expression as found in choruses, quartettes, etc., from the standard operas and oratorios. Elementary harmony, counterpoint and composition have been introduced as elective studies for the second and first classes, and boys as well as girls having a special aptitude for music are the ones who naturally elect these studies, the only requisite being some knowledge of the pianoforte.

The students are instructed in scale formation, intervals, a logical and comparative view of all true chords, in order to give them the power to construct and resolve these chords for themselves.

The study of harmony is carried well into modulation, and of counterpoint through four simple orders or species, including both the major and minor modes. Harvard College has recently passed a vote allowing a knowledge of harmony to count in an entrance examination to the Lawrence Scientific School.

Two periods each week are devoted to instruction, and occasionally the best compositions of the students are sung or played before the entire school; in this way showing the practical side of the work which will prove an important factor in future teaching.

In the Rindge manual training school the young men are taught to

sustain their parts unaccompanied, in compositions of four-part harmony, (first tenor, second tenor, first bass, and second bass) the music being selected and arranged from the standard oratorios, operas, and part songs. Forty-five minutes a week are given to the subject, as in other schools.

Fifteen minutes a day in primary, and ten minutes a day in the grammar grades, are devoted to this study; and pupils in the grammar grades are taught to sing and sustain their parts in reading compositions in two, three, and four parts.

Memorizing music is a feature in all the grades, including the high schools, and in all graduating exercises it is expected that the music by the pupils will be sung or played without notes. To this end rote singing in all the schools forms a part of the instruction in reading music.

The committee reports that the work in music has continued along the same lines as in previous years. Miss Georgia E. Martin has been appointed to aid the director of music in the primary grades, and to his duties has been added the instruction in music in the Rindge manual training school, Mr. Briggs, who had taught music in that school since 1894, having resigned.

PHYSICAL TRAINING.

The Ling system of physical training is used in the primary and grammar schools. Seven grades are regularly supervised, the classes of the eighth and ninth grades being supervised only when special request is made by their teachers.

Ten minutes are given each day to the work in the grammar grades and fifteen minutes in the primary grades. The instruction is given daily by the regular teachers in the different class rooms, under the supervision of the director of physical training, who visits each schoolroom as often as time will permit, and who also meets the teachers for special directions from time to time.

During the months of September, October, November, April, May and June, the primary classes have the privilege of out-of-door recesses, gymnastics forming a part of the daily programme during December, January, February, and March only.

Games and marching are freely used until the third year, when a stronger emphasis is placed on formal gymnastics. Games are also frequently used in the lower grammar grades.

The essential aim of the teaching is to make the period one of healthful exercise and recreation, and also to counteract in part the

tendency to spinal curvatures and flat chests caused by sitting so many hours a day at the school desks.

The following is from the report of the director of physical training to the supervising committee:—

Very few changes have been made during the past year in the matter of seating the pupils in a more hygienic manner. The few conspicuous cases where a large percentage of the pupils in the class was uncomfortably seated have been remedied.

It is a matter of regret that a number of classes in the new Washington school are obliged to use furniture of a very old style, renovated, it is true, but too large for many of the occupants. The new building itself, however, is a model in respect to light and fresh air.

For the third time I report the inadequate provision for lighting the rooms of the Stearns school occupied by grades two and three. These rooms are in the front of the building having windows on either side but none on the front or back. On either side is a high brick structure effectually shutting out nearly all the light from the lower rooms on a dark day. For the sake of the health of the children obliged to sit in these rooms and strain their eyes during the dark winter days, it is hoped that some action to remedy this will soon be taken.

Out-of-door recesses have been a part of the daily programme in nearly all the primary schools from the first of April to the first of December. The teachers report that the pupils return to work with freshness and renewed zeal after these few minutes of freedom in the air and sunshine.

The following facts are also gathered from the report:—

During the months when the primary schools have out-of-door recesses, the director of physical training is able to give ten-minute lessons every two weeks to the grammar grades, instead of longer lessons once in five weeks, which is all that is possible at other times. She finds that the more frequent and briefer lessons are more satisfactory to teachers and pupils.

Through the kindness of Miss Homans, director of the Boston normal school of gymnastics, five of our teachers have the benefit of instruction in that school one hour each week without charge.

A public demonstration of the work in gymnastics was given at the Latin school gymnasium in May by pupils from the sixth grade, two pupils being selected from each class of that grade. An audience of about three hundred witnessed the exhibition, which was enjoyed by the children as well as by their elders. Demonstrations have been held before the teachers in six of the schools, and others are to be given. It is proposed to hold another public demonstration in March, when it is hoped that the sixth and seventh grades will be represented.

The work in all the schools is running more smoothly than at any previous time; teachers and pupils are showing increased interest and desire for better results.

The director makes the following recommendations:— (1) That modern, adjustable furniture be purchased to replace much of that now in use. (2) That all new buildings have a large room on the ground floor for gymnastics and games. (3) That the “Day’s Orders” be printed in a convenient form for the use of the teachers. (4) That an increase of five minutes per day be allowed for gymnastics, so that seventy-five minutes a week, instead of fifty minutes, may be devoted to this subject. (5) That more frequent visits be made by the school committee during the period devoted to gymnastics.

SEWING.

Sewing is taught to the girls of the three lower grades in the grammar schools, and to the boys of the fourth grade who desire the instruction. Forty minutes are given to the work once a week in each grade. All the boys are learning to sew, the regular teacher having oversight of their work. The first lessons in sewing are spent in learning the use of the thimble and needle, in threading the needle, making knots, and fastening ends. Running stitches are made during this time on ruled pieces of cloth. Neatness is insisted upon from the beginning. Stamped patterns of stars or circles are worked in running stitch by the more forward. Then basting by measure is taught. Measuring cards are provided for this, and the stitches are made one-half inch in length, with spaces of one-eighth of an inch. All work is upon practice pieces, with colored thread. The first piece has three lines for running stitches and two for basting.

The second practice piece is of double cloth and has two lines of basting. On this piece stitching is taught, the children imitating machine stitching as nearly as possible. Two lines are done by all, and four lines by the best sewers, who also stitch their initials in the centre.

For the boys’ sake, buttons are brought from home to be sewed on. Strips of cloth for this are basted by those who finish stitching before the others. The shoe button comes first as the simplest, then the two-holed button, then the four-holed. This is the kind of sewing most liked by the boys.

Those who first finish buttons baste strips for overhanding. This is the last stitch taught in this grade. Those who wish, bring pretty pieces of cloth and make pin-balls. The boys who finish their other work in time for this make excellent ones. At the end of the year the boys take home all their work. The girls keep theirs for reference the next year.

The work in the fifth grade begins with folding and basting the model pillowcase. All overhanding strips left unfinished the previous year are finished now, and the pillowcase overhanded. To save time, overcasting is taught directly upon the pillowcase. Folding and basting hems is taught upon a practice piece, a half inch hem on one edge, and a quarter inch hem on the other. On the pillowcase an inch hem is used. After the practice piece, the pillowcase is hemmed and taken home to be washed and ironed. The good sewers are able to complete this in half a year. The next work is making a model apron of calico. The rule for gathering is copied upon paper, and then practiced upon cloth with attention to proper position of the hands. Stroking gathers follows, and the rest of the year is required for making the model apron. Those who finish the year's work take home all practice work of the two years. For extra work the girls learn hemstitching. Occasionally large pillowcases are made by those who sew rapidly, but the work required demands all the time of the average child.

During the first term in the sixth grade those who completed the fifth grade work are taught to make buttonholes, while the others finish their model aprons. After vacation all begin together upon darning on canvas. This being finished, they learn to run a thin place in stocking material, and then to darn a hole. When the darning is finished, buttonholes are taken up again, and then matched patching. Those who have time for extra work practice feather stitching. Throughout the course great care is taken in securing the ends of the thread in beginning, joining, and fastening off. The work now requires the services of two teachers besides that of the director.

The following is the course in sewing: *Fourth Grade.* Running, basting, stitching, sewing on buttons, overhanding, and making pin balls. *Fifth Grade.* Hemming, overcasting, model pillowcase, gathering, stroking gathers, and model apron. *Sixth Grade.* Buttonholes, darning on canvas, darning a thin place in stocking, darning a hole in stocking, and matched patching.

SCHOOL LIBRARIES AND THE PUBLIC LIBRARY.

The English high school has a library of about three thousand volumes. The Latin school has only about one-third of this number. Comparatively few books of a miscellaneous character have been added to these libraries for several years, the public library meeting the demand for such books. The need of the schools is for books of reference and for sets of books for class study.

The grammar schools, with the exception of the Morse and Webster, are not supplied with books for general reading. These are obtained from

the public library, and during the year six thousand thirty-five books have been delivered to the schools. Last year the number was nearly nine thousand. The following from the report of the librarian to the trustees of the Cambridge public library shows why the number is less than last year : —

“The decreased appropriation made for the library in the budget of this year, after we had already lived several months on the basis of last year’s expenditure, necessitated a reduction in our expenses and resulted in the closing of our local delivery stations.

As the delivery of books did not cease until the end of May, the schools were not materially affected until the beginning of the present term. An arrangement has recently been made for sending books to the schools by express once in two weeks, and the expense is borne by the school board. It should be a source of great gratification to us that the school work can go on, even though under somewhat less favorable conditions ; for the total severance of relations between the schools and the library would be the greatest misfortune that could result from the abandonment of outside deliveries.”

The educational value of the public library is well stated in the following paragraph from the report of the trustees for the past year : —

“The library is an important part of our educational system. Its scope is broader and its clientage larger than those of the public schools. No institution supported by the money of the people is more democratic, in the best sense of the term. Its advantages are free to every man, woman, and child who can read. It is a supplementary department of every school, public or private, in the city, from the lowest grade to the highest, — a school for the teachers as well as the pupils. It is the high school for those who cannot continue their studies beyond the grammar school, and for those of mature age who had few opportunities for school training in their early years. It is the evening school, open every day, Sundays not excepted, for those who cannot attend the regular evening schools on account of their fixed hours and courses of study. It is the industrial school for the working man who has no other means of self-culture in his special craft. Its advantages are eminently for those who are least able to get them elsewhere, — who can buy few books and take few periodicals, but are here supplied with both in abundance ; and the cost of it is paid almost entirely by those who are least dependent upon its resources.”

EVENING SCHOOLS.

The following account of the evening schools is given by Mr. Hubbard, the agent of the school committee, who has the general supervision of these schools : —

There are seven evening schools — two drawing schools, one high school, and four elementary schools. In accordance with the rules of the school board, there are two terms of the evening schools. The first term begins on the second Monday of October, and continues every Monday, Wednesday, and Friday evening until the end of the week before Christmas. The second term begins on the first Monday, Wednesday, or Friday evening after the opening of the day schools in January, and continues thirty-five evenings. The sessions begin at half past seven and continue two hours. No session is held on the evening of a holiday, or during the vacations of the day schools.

The evening drawing schools are under the supervision of the director of drawing for the day schools. There are two of these schools, one for instruction in mechanical drawing, which occupies four rooms in the Central Square building, and one for instruction in free-hand drawing, which occupies the drawing room in the English high schoolhouse. In the mechanical school two courses are provided, — a three years' course in machine drawing, and a three years' course in architectural drawing. In the free-hand school provision is made for a three years' course in free-hand drawing. Diplomas are given to graduates of either course.

The evening high school is held in the English high school building, and offers a three years' course of instruction in the following subjects : arithmetic, bookkeeping penmanship, English composition, English literature, civics, history, algebra, geometry, stenography, Latin, French, and German. Diplomas are granted to graduates of the three years' course.

The elementary evening schools occupy rooms in four of the grammar school buildings, the Putnam, Roberts, Shepard, and Webster. Reading, writing, arithmetic, geography, language, history, and bookkeeping are taught in these schools in classes, so far as classification is possible, but a large part of the work is individual. No definite course is arranged, but an opportunity is offered to pupils to prepare to enter the evening high school, and certificates of admission are given to those who are qualified to begin the work in that school. In addition to the subjects given above, classes in civil service, sewing, wood working, and mechanical drawing are formed when a sufficient number express an intention to take any one of these courses.

The following table shows the attendance of the evening schools for the year 1901-1902:—

	Number Registered	Average Attendance	Average No. of Teachers*	Average No. of Pupils to a Teacher.	Number of Graduates
Mechanical Drawing...	140	76	4	19	15
Free-hand Drawing....	80	38	2	19	7
High School.....	364	162	9	18	14
Allston School.....	374	127	11	11	28
Putnam School.....	278	85	8	11	10
Shepard School.....	189	61	6	10	17
Webster School.....	162	75	6	13	12
Total	1,587	624	46	14	103

* The principals and curators are not included in these averages.

The following table shows the cost of the evening schools for the year 1901-1902:—

	Cost of Instruction	Cost of Text-books and Supplies	Cost of Light, Fuel, and Janitor	Total Cost	Cost per Pupil
Mechanical Drawing...	\$868 00	\$76 79	\$208 38	\$1,153 17	\$15 17
Free-hand Drawing....	430 00	35 69	74 17	539 86	14 21
High School.....	1,682 75	101 90	685 63	2,470 28	15 25
Allston School	1,122 50	151 36	317 73	1,591 59	12 53
Putnam School.....	878 00	49 08	311 51	1,238 59	14 57
Shepard School.....	597 00	21 53	152 85	771 38	12 65
Webster School.....	621 00	9 06	212 93	842 99	11 24
Total	\$6,199 25	\$445 41	\$1,963 20	\$8,607 86	\$13 79

The above table shows that the total registration of the evening schools during the year 1901-1902 was one thousand five hundred eighty-seven, an increase of one hundred eight over that of the preceding year, and the average attendance was six hundred twenty-four, an increase of sixty-three. This shows that the average attendance is about 40 per cent of the registration, an increase of about 2 per cent above that of the preceding year.

The total cost of all evening schools has been \$8,607.86, an increase of \$109.14 above that of last year, but the cost per pupil was \$13.79, a decrease of \$1.35 per pupil on the average attendance.

The fire in the Allston schoolhouse occurred December 12, 1901, breaking up the evening school for a time and thus reducing the average

attendance, but the school was soon reorganized in the Roberts school building where it still holds its sessions.

During the first term of the schools for 1902-1903 the total registration to December 1 was one thousand six hundred eighty-seven, an increase of one hundred seventeen. The average attendance was nine hundred eighty-one, an increase of ninety pupils, with an average of fifty-four teachers, or of two more teachers than last year.

At the meeting of the Board in June the salaries of teachers in the evening schools were fixed as follows:— Principals of the mechanical drawing and of the evening high school, \$4.00 per evening. Principals of elementary evening schools, \$3.00; teachers in the drawing schools, \$3.00; teachers in the high school, \$2.00, and teachers in the elementary schools \$1.50 per evening.

The committee on evening schools has adopted a rule that only experienced teachers shall be appointed to teach in these schools.

The lines of work of last year have been pursued this year successfully. Classification has been extended with decided advantage, and the schools are in excellent condition as regards attendance and interest in the work.

Recently an experiment has been tried in the Allston school with the purpose of increasing the attendance and interest in the school as well as giving instruction to its members. The last hour Friday evenings has been devoted to lectures, by citizens who were willing and well qualified to assist in the work. Dr. Putnam gave a lecture on "First Aid to the Injured", Mr. Bates, on "Citizenship", Dr. Bicknell, two on "Down in Dixie." Most of these lectures have been illustrated with the stereopticon. Mr. Getchell, the principal, has arranged with several other gentlemen to give lectures on various topics. The members of the school evince much interest in this line of instruction which is being employed in many cities in connection with evening school work.

The recommendation of the committee of last year that the Rindge manual training school be opened evenings for instruction to young men who are engaged in mechanical pursuits has not been acted upon. It seems a neglect of a valuable opportunity that this fine and costly plant should not be fully utilized for the benefit of our young men, many of whom were compelled to leave school at an early age. Opening this school for evening work would be of great advantage to such persons. For some years the city of Springfield has maintained what they term "Evening School of Trades" in which instruction is given in mechanical drawing, machine-shop practice, tool making, plumbing, joinery, wood turning, pattern making, mathematics for mechanics, with a lecture course in magnetism and electricity and some laboratory work in electricity.

That these classes are very popular is shown by an enrolment of about three hundred with the prospect of a very large increase next year if accommodations can be supplied. The Plumbers' Association has promised to give the preference to members of these classes when hiring help and the city is profited by the tools made by the class in tool making. Springfield has a population estimated at 62,000, a school population of 10,400, and a valuation of \$74,338,000, and she expended for her schools \$339,677 last year.

It is gratifying to note that more adults are in the evening schools this year. The attendance has been regular and the spirit of the schools earnest, though the work of the holidays has interfered seriously with the attendance during the last few weeks, as it does every year.

VACATION SCHOOLS.

The vacation schools for 1902 did not open at the usual time owing to the prevalence of smallpox in the city. About twelve hundred children expressed a desire to attend these schools, but arrangements had not been completed when the day schools were closed with only a half day's notice. Under these circumstances it was doubtful whether the vacation schools would be opened. Later it was decided to open a part of them. Classes in sloyd, cooking, and dressmaking were formed at the English high school building, and in sloyd and dressmaking at the Putnam building. The older pupils who took sloyd also had instruction in drawing, and the younger pupils in some academic study. The schools were in session from July 14 to August 20, and cost \$1,016.97, or an average of \$3.05 per pupil.

The following table shows the number that joined these classes and the average attendance in each class :—

Schools	Studies	Number Registered	Average Attendance
English High School.....	Sloyd and Drawing.....	96	51.6
English High School.....	Sloyd and Academic....	91	49.1
English High School.....	Cooking.....	58	36.3
English High School.....	Dressmaking.....	72	48.7
Putnam School.....	Sloyd and Drawing.....	95	69.2
Putnam School.....	Sloyd and Academic....	33	26.0
Putnam School.....	Dressmaking.....	96	52.1
Total.....	.....	541	333.0

TRUANT OFFICERS.

Four officers are employed. The city is divided into four districts, and each officer has assigned to him the schools in one district. Among their duties are the following: to visit each school at least once a day, unless otherwise directed by the agent; to prevent children from loitering about the school premises; to notify the teachers of all cases of contagious and infectious diseases reported by the board of health; to attend the evening schools when so directed by the the agent of the Board to assist in the preservation of order, and to visit places of business where children are employed to see that none are employed unlawfully. They make all complaints for truancy, absenteeism, or school offences at the district court, attend the trials as witnesses, and take boys to the Middlesex county truant school when they are sentenced.

By the rules of the school board the work of the truant officers is done under the supervision of the committee on schoolhouses; and under the direction of this committee, it is the duty of the agent of the Board to consider all cases of truancy, of persistent violation of the rules of the school, of juvenile vagrancy, of unlawful detention from school, of neglect by parents; and of any failure on the part of pupils or parents to comply with the rules of the school committee or the public statutes relating to school attendance. It is also the duty of the agent to direct the officers to make complaints; to certify the records in these cases when presented before the district court; and to exercise such supervision of the boys who are sent by the court from Cambridge to the truant school as may be allowed under the statutes.

The following is from the report of the committee in charge of the work of the truant officers:—

The four officers have performed their various duties in an efficient and satisfactory manner. They have investigated fourteen thousand one hundred forty-six cases of absence, made two hundred forty-three visits to factories, shops, and mercantile establishments, put one hundred children into school who had failed to enter, made twenty-six complaints in court for various school offences, and have taken twenty boys to the truant school.

Of the twenty-six complaints made, twenty-two were for truancy, one for absenteeism, and three for being habitual school offenders. Five of the boys complained of were put on probation, one left the city, and twenty were sentenced to the truant school,—five for one year and fifteen for two years each. Of the twenty boys sentenced, fourteen belonged to the public schools, and six were members of parochial schools.

Cambridge had thirty-six boys in the truant school December 1, 1901. Twenty-three have been discharged, and twenty sentenced during the year, leaving thirty-three in the school. These boys have cost the city for board, clothes, transportation, etc., \$1,847.10, an average of \$51.31 each.

The authorities of nearly all the parochial schools have co-operated with the agent in efforts to prevent truancy and with excellent results.

The truant officers with five assistants have canvassed the city for the school census required by the public statutes. The cost of assistance in taking and recording the census was \$230. This work seriously interferes with the other duties of the officers, as boys who delight in truancy seem to know intuitively when the officers are off duty, but there appears to be no other way without considerably increasing the expense of the census. The following is the summary of the school census for 1902:—

Number of children in the city between five and fifteen, boys, 7,656;	
girls, 7,931	15,587
Number in public schools between five and fifteen	12,324
Number in private schools between five and fifteen	2,764
Number not attending school between five and seven	199
Number not attending school between seven and fourteen	95
Number not attending school between fourteen and fifteen	205
Whole number not attending school between five and fifteen	499
Number in the city between five and six	1,892
Number in the city between seven and fourteen, boys, 5,276; girls, 5,558	10,834

It appears from statistics procured by one of the truant officers that there are eleven private schools in Cambridge, which contain three hundred eleven pupils and receive \$40,020 for tuition, and five parochial schools having three thousand one hundred forty pupils; making three thousand five hundred forty-one pupils attending other than the public schools.

In connection with the subject of attendance, the agent reports that the system of reporting absences and tardiness by the schools to the agent under Section 77 of the Rules, and the system of notification by him to the parents have been continued even more generally than last year, and have been adopted to some extent by the parochial schools.

The number of first notices sent to parents or guardians is five hundred ten; the second notice has been sent to eighty-three; and the third notice, which requests the parent to come to the office, has been sent to thirty-two. The system seems to be helpful in securing regular attendance. The per cent of attendance for three years is as follows:— For 1899-1900, 91.8; for 1900-1901, 92.1; for 1901-1902, 92.8. This shows an increase of one per cent since the introduction of the present system of supervision.

Age and schooling certificates have been issued to five hundred seven children between the ages of fourteen and sixteen, an increase of one hundred twenty over last year. March 13, 1902, the legislature passed a bill requiring that all minors who are working should have a certificate from the school department of their ability to read and write. Since October, three hundred forty-two of these certificates have been issued. Certificates have also been issued to twelve who could not read English, though most of them could read in their native language. The certificates given to these require that they attend the evening schools.

CONTAGIOUS DISEASES.

In 1894 the board of health, in accordance with the request of the school committee, appointed a physician, whose duty it is to examine all cases of contagious diseases reported, and to direct the exclusion from the schools of all pupils whose presence will, in his opinion, be a menace to the health of others. He reports his action on every case to the secretary of the school committee. The physician issues all certificates authorizing such children to return to school, as provided by Chapter 496, Section II., Acts of 1898.

As a further precaution against contagious diseases, the board of health established, February 26, 1896, a system of medical inspection of children in the schools. The city was divided into six districts, in each of which a physician was appointed to visit the schools in that district. The duties of these physicians as now defined are as follows: to visit the schools subject to their inspection during the morning session of every school day; to examine such children as are indicated to them by the teacher as having complained, or as appearing to be suffering from disease; to inspect such other children or such parts of the building as they deem necessary for the protection of the pupils, examining at least one school each day; to recommend to the principals to send home immediately any pupil whom they may suspect of having any infectious or contagious disease, and also, in cases of nearsightedness or deafness of pupils, to advise the parents to have the eyes or ears of such pupils examined. On the first of each month, the physicians send a report of their work to the board of health.

Once each term it is the duty of the principal of each school to call the attention of the pupils to the following rule:—

“No pupil who has visited any apartment in which a person is, or within two weeks has been sick with smallpox, varioloid, diphtheria, or scarlet fever, shall be allowed to attend school until the expiration of two weeks after such visit.”

The agent of the school committee reports that during the year 1901–1902, the following cases of contagious diseases have been reported by the board of health to the office of the agent, and by the truant officers to the schools :—

Diphtheria, four hundred seventy-eight, a decrease of two hundred seven; membranous croup, thirteen, a decrease of one; scarlet fever, one hundred seventy-nine, an increase of eighty-one; smallpox, one hundred eighty-three, an increase of one hundred seventy-eight; measles, four hundred thirty-three, a decrease of one hundred six.

TERMS, HOLIDAYS, AND SCHOOL HOURS.

The school year is divided into three terms :—

The time for beginning the autumn and spring terms, and for closing the winter and spring terms, is fixed annually at the regular meeting of the committee in February. The autumn term ends December 23. The winter term begins January 2 (or the day after that celebrated as New Year's Day).

The holidays are Saturdays; Thanksgiving day, with the preceding day and the day following; the twenty-second of February; the nineteenth of April; Memorial day; the seventeenth of June; and in addition to these, for the high schools, Commencement day at Harvard University.

The sessions of the high schools begin at 8.30 A. M., and end at 1.30 P. M. The sessions of the Rindge manual training school begin at 8.30 A. M., and end at 2 P. M. These schools have a recess of half an hour in each session.

With the exception of the Russell school, the morning sessions of the grammar and primary schools begin at 9 and end at 11.45. The afternoon sessions begin at 2 and end at 4, except during the months of November, December, and January, when they begin at 1.30 and end at 3.30. The grammar schools have no outdoor recess. In the primary schools the principal may, at her discretion, substitute an outdoor recess for the period at present devoted to physical training. The sessions at the Russell school begin at 8.30 A. M., and end at 1.30 P. M.

The sessions of the kindergartens are from 9 A. M. to 11.50 A. M.

TEACHERS, APPOINTMENTS, RESIGNATIONS.

There are now four hundred seventeen teachers in the schools, thirty-nine of whom have been appointed during the year. Twenty-five have resigned, two have died, five have been given leave of absence for rest or for some special reason, and three are absent for study or travel, under the following rule of the school committee: —“ Any teacher who has served in the city for ten years, may on recommendation of the superintendent and vote of the Board, have leave of absence for one year for purposes of study or travel, and may receive one-third of his salary, provided the amount in no case shall exceed five hundred dollars.”

Since the adoption of this rule in 1896, fourteen teachers have had leave of absence for a year for purposes of study or travel, — six from the high schools, five from the grammar schools, two from the primary schools, and one from a kindergarten.

The number of resignations this year is larger than usual. Six resigned to accept positions in Boston. One was appointed a teacher in the Salem normal school, four received appointments in other cities, and four were married. Two teachers resigned after long and faithful service. Mrs. Augusta G. Mirick taught in the Putnam school for twenty years, and subsequently in the Gannett school for six years. Miss Sarah E. Stewart became a teacher in the Dunster school in 1867, and in 1870 was transferred to the Boardman school, her whole term of service being thirty-five years.

Of the teachers who died, Miss Mary G. Carpenter had taught in the Agassiz school for eighteen years, and Miss Jane Whoriskey, in the Gore school for ten years. Both of these teachers were devoted to their work.

Another teacher whose resignation will take effect the first of March has ceased active work in the schools. For forty-four years Miss Ada H. Wellington has taught in the Harvard school, filling the position known for these many years as that of master's assistant. For twenty-two years she was associated with Mr. Aaron B. Magoun, the first master of that school, and for a little more than twenty years with Mr. James H. Barrell who succeeded Mr. Magoun, and for nearly two years with Mr. Thomas W. Davis, the present master. During all these years Miss Wellington's strong personality has been felt in the work of the school; and her influence has followed her pupils into their later life.

Perhaps in no way can this influence be more clearly seen than in her successful efforts to replace the marble bust of Mr. Magoun, destroyed when the Harvard schoolhouse was burned. A few selections from the circular letter sent to the contributors to the second bust will show that

the former pupils of the Harvard school needed only a word from Miss Wellington to awaken anew their interest in the school and their loving remembrance of Mr. Magoun. These selections are also given that the school reports may contain the facts relating to the gift of the two busts of Mr. Magoun.

The following is an account of the loss of the first bust, and of its replacement by the second :—

“On the morning of March 21, 1899, the third story of the Harvard schoolhouse was totally destroyed by fire. The loss most deeply to be regretted was the bust of Mr. Magoun, as there seemed no possibility of replacing it. After a while, however, it became known that the plaster model from which it was made was in a perfect state of preservation in the home of Mr. George B. Magoun, in Babylon, L. I. This led to the hope that a duplicate might be made if funds could be procured. The plans which were so successful more than thirty years before were adopted. Appeals were made through the local papers, and personal letters were sent to more than two hundred of his pupils. In the responses to these appeals great encouragement was given to proceed with the work. The plaster cast was brought to Boston and placed in the hands of an expert marble worker for reproduction. The work was a perfect success, and September 9, 1902, the new bust was placed in its position of honor in the hall of the Harvard school. It stands in a niche in the wall, beneath which is a bronze tablet bearing the following inscription :—

IN LOVING MEMORY OF
AARON BUZZELL MAGOUN
FIRST MASTER OF THE HARVARD SCHOOL
APPOINTED 1838 RESIGNED 1881
GIVEN BY MR. MAGOUN'S FORMER PUPILS”

The account of the unveiling of the first bust is as follows :— “On September 9, 1875, a very enjoyable reunion was held, and the unveiling of the bust was enthusiastically received. It was placed upon a walnut pedestal on which was a white marble tablet bearing in gold letters this inscription :—

From the Scholars of 1838–1871”

The following is but a just tribute to Miss Wellington :—

“This paper is not complete without an allusion to the person whose services contributed in so large a degree to the production of both busts, the original and its successor. Without her strong personal interest in the work, the first bust might have taken form, but the second would have hardly been fashioned. All credit is due to Miss Ada H. Welling-

ton, for twenty-two years associated with Mr. Magoun in the Harvard school, and whose connection with the school has continued until her term of service is even longer than was his. What she has accomplished in helping to perpetuate the memory of the first master of that school crowns her work of forty-four years of faithful service."

QUALIFICATION OF TEACHERS.

A person to be eligible to the position of teacher in a kindergarten must have had a course in a high school, a course in a kindergarten normal school, a year's experience in teaching either in a kindergarten or a primary school, and must be able to play the piano; to be eligible to a position in a primary or grammar school, he must have had a course in a high school, a course in a normal school, and a year's experience in teaching; to be eligible to a position in a high school, except in the manual training department of the manual training school, he must be a college graduate. Equivalent preparation may be accepted.

When a teacher has been nominated for a position in a kindergarten or primary school, or for a position below that of principal or master in a grammar school or high school, two persons of experience among the teachers who are not connected with the school in which the nominee is to serve, are deputed by the superintendent to visit the teacher nominated and to examine him at work. Each person so deputed reports in writing to the superintendent; and these reports are kept on file by him, and are open to inspection by members of the Board only. For a nomination to a position in a high school, the superintendent, with the consent of the committee on high schools, may dispense with such examination, or may depute as examiners teachers connected with the school in which the nominee is to serve or persons not in the service of the city.

The committee on teachers considers all nominations made by the superintendent. They confer with the superintendent, consider the reports of the examiners deputed by him, make further inquiry at discretion, and report to the Board for final action.

Any nomination referred to the committee on teachers elapses at the expiration of four months, not counting the summer vacation. A person who has failed of confirmation is not to be nominated to a similar position within two years, except on the approval of this committee.

This committee inquires and reports to the Board in executive session, as to the success of any teacher in the employment of the city, when so requested by any member of the Board or by the superintendent; and no teacher whose success is under inquiry receives the regular increase of salary, except on the recommendation of this committee.

Preparation for the work of teaching as shown by years of study, and experience as shown by years of teaching, are considered in fixing the salaries of teachers at the time of their nominations.

Under the direction of the superintendent, teachers may visit other schools to observe the discipline and instruction. They may be required to attend teachers' meetings or courses of instruction in methods of teaching for one hour a week. Such meetings may be held on Saturday mornings during term time or at such other time, not in school hours, as the superintendent may direct. Meetings in addition to those indicated above may be held by the superintendent or may be called by him, on request of directors in special subjects.

SALARIES OF TEACHERS AND SCHOOL OFFICERS.

LATIN SCHOOL AND ENGLISH HIGH SCHOOL.

Head Masters	\$3,000 00
Masters	2,000 00
Masters' Assistants	1,200 00
Teachers, first year	700 00
with an annual increase of \$50 until \$950, the maximum, is reached.	
Assistant teachers, first year	500 00
“ “ second year and each succeeding year	600 00

RINDGE MANUAL TRAINING SCHOOL.

Head Master	\$3,000 00
Master's Assistant	1,300 00
Teachers' salaries range from \$700 to \$1,500	

WELLINGTON TRAINING SCHOOL.

Master	\$2,500 00
Supervising Teachers (three) first year	900 00
“ “ second year and each succeeding year	1,000 00
Masters' Assistant, first year	800 00
“ “ second year and each succeeding year	900 00
Teachers of the eighth grade	700 00
Teachers of the seventh grade (one year's experience)	450 00
Teachers of the other grades	250 00

GRAMMAR AND PRIMARY SCHOOLS AND KINDERGARTENS.

Masters of grammar schools	\$2,000 00
Sub-masters, first year	1,000 00
with an annual increase of \$100 until \$1,400, the maximum, is reached.	
Masters' Assistants, first year	800 00
“ “ second year and each succeeding year	900 00
Teachers of the ninth grade, first year	750 00
“ “ “ “ second year and each succeeding year	800 00
Special Teachers in grammar schools, first year	700 00
“ “ “ “ “ second year and each succeeding year	750 00
Principals of primary schools, first year	700 00
“ “ “ “ second year and each succeeding year	750 00
with five dollars additional for each room under her supervision.	
Teachers of grammar and primary schools, and principals of kindergartens, first year	\$450 00
with an annual increase of \$50 until \$700 is reached.	

SUBSTITUTES.

The pay of a substitute teacher in a high school, who is employed temporarily, is \$2.50 a day ; if employed one month or more, it is at the rate of \$500, \$600 or \$700 a year, the sum to be determined by the superintendent, who shall consider the experience of the teacher and the position to be filled, in fixing the sum.

The pay of a teacher who is employed temporarily as a substitute in a grammar school, a primary school, or a kindergarten, is \$1.00 a session ; if employed one month or more, it is at the rate of \$450 a year.

EVENING SCHOOLS.

Principal of Mechanical Drawing School, per evening		\$4 00
Principal of High School	“ “	4 00
Principal of Elementary Schools	“ “	3 00
Teachers in Drawing Schools	“ “	3 00
Teachers in High School	“ “	2 00
Teachers in Elementary Schools	“ “	1 50

SPECIAL TEACHERS AND OFFICERS.

Director of Music		\$2,000 00
Assistant Teacher in Music		800 00
Director of Drawing		1,900 00
Assistant Teacher in Drawing		800 00
Director of Nature Study (three-fifths time)		1,000 00
Director of Physical Training		900 00
Instructor in Physical Training in the High Schools		700 00
Director of Sewing		700 00
Teachers of Sewing		600 00
Superintendent of Schools		3,500 00
Supervisor of Primary Schools		1,200 00
Agent of the Board		2,100 00
Truant Officers (four are employed)		1,000 00
Secretary of the School Committee		400 00
Page of the School Committee		25 00
Secretary and Librarian of the Latin School		600 00
Secretary and Librarian of the English High School		600 00
Secretary and Librarian of the Rindge Manual Training School		600 00

The following rules apply to special cases : —

Upon the recommendation of the superintendent and the committee on teachers, the salary of a teacher in a grammar or primary school, or of the principal of a kindergarten, may be increased from \$700 to \$750, provided such teacher has served at least one year. The number of teachers whose salaries may thus be increased is not to exceed one-third of the whole number of teachers in these grades.

Assistant teachers, that is, teachers not in charge of a room, are paid \$450 the first year, \$500 the second, and \$550 the third and each succeeding year ; and, in the case of assistants in the kindergartens, \$600 for the fourth and each succeeding year.

MEMORY SELECTIONS.

One of the requirements in the course of study for the grammar schools is that selections of poetry and prose shall be committed to memory and recited, not in concert only, but by each pupil, and that they be written frequently from memory. For the primary schools the directions are as follows; — “Teach as a part of the regular exercises a few pieces of standard poetry, also quotations and maxims, and copy what is taught each term into a blank book.”

The committing to memory of choice selections of poetry and prose has been the practice in the schools of Cambridge for many years. The selections have been left to the teachers, the idea being that the best results would be secured when the teacher was free to select such pieces as were of special interest to her.

In former years the superintendent took special pleasure in listening to the recital of these pieces in the several schools, but in these recent years he has not found time to hear them. He decided, therefore, to ask that a copy of all the pieces learned during the school year be sent to his office. This was done, and during the summer vacation he spent days in reading these papers and noting the selections made by the different teachers. In fact he became deeply interested in the work, and the papers which were intended to give information as to what had been committed to memory also revealed to him in a measure the literary taste and judgment of the teacher. A great variety of pieces was selected and in most cases they were selections of real merit.

It was found, however, that frequently the same selection was made by teachers of different grades, the result being a loss to the pupils who had previously learned the piece. To avoid this in future the teachers of the several grades were requested to make a list of pieces which should be used only in the grade for which they were selected. The teachers of the lower grades were not to include in their lists any selection made for a higher grade. This required that the selections for the ninth grade should be made first. Grade meetings were called one after another, until a list was prepared for each grade. No teacher is restricted to the pieces selected for her grade. She can select from these selections the whole or a part of any piece, or choose other pieces with this limitation, that no piece selected for one grade shall be taught in another.

The course of study requires that at least two hundred lines be taught in each of the four upper grades, one hundred fifty in the fifth grade, and one hundred in the fourth grade.

FRANCIS COGSWELL,
Superintendent of Schools.

SELECTIONS FOR MEMORIZING.

(SELECTED BY THE TEACHERS OF THE GRAMMAR AND PRIMARY GRADES.)

NINTH GRADE.

The Chambered Nautilus, ... *Oliver Wendell Holmes*
 The Address at Gettysburg, ... *Abraham Lincoln*
 The Vision of Sir Launfal, ... *James Russell Lowell*

(Beginning with "What is so rare as a day in June?")

Recessional, ... *Rudyard Kipling*
 Old Ironsides, ... *Oliver Wendell Holmes*
 Thanatopsis, ... *William Cullen Bryant*

(Beginning with "So live that when thy summons comes.")

The Reply to Hayne, ... *Daniel Webster*

(Beginning with "Mr. President, I shall enter on no encomium upon
Massachusetts," or "While the Union lasts.")

Those Evening Bells, ... *Thomas Moore*
 Each and All, ... *Ralph Waldo Emerson*
 The Rhodora, ... *Ralph Waldo Emerson*
 Elegy Written in a Country Churchyard, ... *Thomas Gray*

(First sixteen stanzas.)

Nature, ... *Henry Wadsworth Longfellow*
 On His Blindness, ... *John Milton*

EIGHTH GRADE.

The Footpath to Peace, ... *Henry Van Dyke*
 The Daffodils, ... *William Wordsworth*
 To the River Charles, ... *Henry Wadsworth Longfellow*

Ode Recited at the Harvard Commemo-

ration, July 21, 1865, ... *James Russell Lowell*

(Beginning with "Life may be given in many ways," and ending with
"New birth of our new soil, the first American.")

Crossing the Bar, ... *Alfred Tennyson*
 The Concord Hymn, ... *Ralph Waldo Emerson*
 Selection from Hamlet, ... *William Shakespeare*

(Polonius to Laertes, twenty-two lines from "Give thy thoughts no tongue.")

Selection from an Oration, ... *Henry Cabot Lodge*

(Beginning with "It is a high honor to be governor of Massachusetts.")

Our State, ... *John Greenleaf Whittier*

Selection from an Oration, ... *Charles Sumner*

(Beginning with "There is the national flag!")

To the Dandelion, ...	<i>James Russell Lowell</i>
Our Country, ...	<i>Thomas Smith Grimke</i>

(Beginning with "We cannot honor our country with too deep a
reverence.")

SEVENTH GRADE.

To a Waterfowl, ...	<i>William Cullen Bryant</i>
Battle Hymn of the Republic, ...	<i>Julia Ward Howe</i>
Our Home — Our Country, ...	<i>Oliver Wendell Holmes</i>
A Parable, ...	<i>James Russell Lowell</i>

(Beginning with "Worn and footsore was the Prophet.")

Massachusetts, ...	<i>Anna Phillips Clarke</i>
Selection from the Merchant of Venice, ...	<i>William Shakespeare</i>
(Portia's reply to Shylock, "The quality of mercy is not strained.")	
The Snow Storm, ...	<i>Ralph Waldo Emerson</i>

(First ten lines.)

The Winged Worshipers, ...	<i>Charles Sprague</i>
The Love of Country, ...	<i>Sir Walter Scott</i>

(From the Lay of the Last Minstrel; Canto VI., sixteen lines from
"Breathes there the man with soul so dead.")

Abou Ben Adhem, ...	<i>Leigh Hunt</i>
The Trailing Arbutus, ...	<i>John Greenleaf Whittier</i>
The Legend Beautiful, ...	<i>Henry Wadsworth Longfellow</i>

SIXTH GRADE.

An Ode. "The spacious firmament on high"	<i>Joseph Addison</i>
Independence Bell, ...	<i>Anonymous</i>
To the Fringed Gentian, ...	<i>William Cullen Bryant</i>
The Sculptor, ...	<i>George Washington Doane</i>
The Landing of the Pilgrims, ...	<i>Felicia Dorothea Hemans</i>
Union and Liberty, ...	<i>Oliver Wendell Holmes</i>
The Builders, ...	<i>Henry Wadsworth Longfellow</i>
A Christmas Carol, ...	<i>James Russell Lowell</i>
Hope, Faith, and Love, ...	<i>Friedrich von Schiller</i>
The Corn Song, ...	<i>John Greenleaf Whittier</i>
The Pipes at Lucknow, ...	<i>John Greenleaf Whittier</i>
The Three Bells, ...	<i>John Greenleaf Whittier</i>

FIFTH GRADE.

The Village Blacksmith,	.	.	.	<i>Henry Wadsworth Longfellow</i>
Paul Revere's Ride,	.	.	.	<i>Henry Wadsworth Longfellow</i>
The Arrow and the Song,	.	.	.	<i>Henry Wadsworth Longfellow</i>
The Barefoot Boy,	.	.	.	<i>John Greenleaf Whittier</i>
Nobility,	.	.	.	<i>Alice Cary</i>
The True Life,	.	.	.	<i>Horatius Bonar</i>
The Sandpiper,	.	.	.	<i>Celia Thaxter</i>
A Hymn. "O Little town of Bethlehem,"	.	.	.	<i>Phillips Brooks</i>
Little Brown Hands,	.	.	.	<i>Mary H. Krout</i>
Beautiful Things,	.	.	.	<i>Anonymous</i>
The Will and the Way,	.	.	.	<i>Anonymous</i>
Pure Cold Water,	.	.	.	<i>S. Jennie Smith</i>

FOURTH GRADE.

The Brook and the Wave,	.	.	.	<i>Henry Wadsworth Longfellow</i>
A Hymn. "While shepherds watched their flocks by night,"	.	.	.	<i>Nahum Tate</i>
Little Boy Blue,	.	.	.	<i>Eugene Field</i>
Barbara Frietchie,	.	.	.	<i>John Greenleaf Whittier</i>
Obedience,	.	.	.	<i>Phæbe Cary</i>
The First Snow-Fall,	.	.	.	<i>James Russell Lowell</i>
Take Care,	.	.	.	<i>Alice Cary</i>
A Gentleman,	.	.	.	<i>Margaret E. Sangster</i>
In School Days,	.	.	.	<i>John Greenleaf Whittier</i>
Children,	.	.	.	<i>Henry Wadsworth Longfellow</i>
Sir Robin,	.	.	.	<i>Lucy Larcom</i>
November,	.	.	.	<i>Lucy Larcom</i>

THIRD GRADE.

October's Bright Blue Weather,	.	.	.	<i>Helen Hunt Jackson</i>
The Pumpkin,	.	.	.	<i>John Greenleaf Whittier</i>
Selection from Snow-Bound,	.	.	.	<i>John Greenleaf Whittier</i>
(Beginning with "The sun that brief December day.")				
Jack Frost,	.	.	.	<i>Thomas Bailey Aldrich</i>
The Clear Vision	.	.	.	<i>John Greenleaf Whittier</i>
Nature's Easter Music,	.	.	.	<i>Lucy Larcom</i>
Spring Has Come,	.	.	.	<i>Oliver Wendell Holmes</i>
(One stanza beginning with "When wake the violets, Winter dies.")				

The Planting of the Apple Tree, ...	<i>William Cullen Bryant</i>
The Children's Hour, ...	<i>Henry Wadsworth Longfellow</i>
Hiawatha's Sailing, ...	<i>Henry Wadsworth Longfellow</i>

SECOND GRADE.

September, ...	<i>Helen Hunt Jackson</i>
How the Leaves Came Down, ...	<i>Susan Coolidge</i>
Thanksgiving Day, ...	<i>Lydia M. Child</i>
Spring, ...	<i>Celia Thaxter</i>
Child's World, ...	<i>William B. Rand</i>
Good Night and Good Morning	<i>Lord Houghton</i>
Hiawatha's Childhood	<i>Henry Wadsworth Longfellow</i>
We Thank Thee	<i>Ralph Waldo Emerson</i>

FIRST GRADE.

Come Little Leaves, ...	<i>George Cooper</i>
The Snow Fairies, ...	<i>George Cooper</i>
Washington's Birthday	<i>Margaret E. Sangster</i>
Little May, ...	<i>Mrs. Miller</i>
Song from Pippa Passes	<i>Robert Browning</i>
"What does little Birdie say?"	<i>Alfred Tennyson</i>

The following selections appropriate to the seasons, which have been learned in connection with nature study in the primary grades, have been set to music by the director of music and his assistant:—

THIRD GRADE.

New Year Song	<i>Laura E. Richards</i>
Our Daily Paths, ...	<i>Felicia Dorothea Hemans</i>
The Story of the Vane, ...	<i>Walter Learned</i>
An April Morning, ...	<i>F. Clifton Hayes</i>
A May Song, ...	<i>Anna M. Pratt</i>
A Sad Disappointment, ...	<i>Kate Kellogg</i>
Sweet Song of Songs, ...	<i>Gerald Massey</i>
Discontent, ...	<i>Sara Orne Jewett</i>

SECOND GRADE.

October's Party, ...	<i>S. C. Hanson</i>
Thanksgiving, ...	<i>Alice C. D. Riley</i>
Winter Song, ...	<i>Ludwig Holty</i>

[illegible]

FIRST GRADE.

[illegible]

IN SCHOOL COMMITTEE, February 19, 1903.

Ordered, That the report of the superintendent as read and outlined by him be accepted and adopted as the annual report of the school committee for 1902, and that the secretary be authorized to append the names of the members of the committee thereto.

SANFORD B. HUBBARD,
Secretary.

Members of the School Committee for 1902

JOHN H. H. McNAMEE, *Chairman ex-officio.*

WILLIAM TAGGARD PIPER.	PHILIP M. FITZSIMONS.
CHARLES H. THURSTON.	ROBERT WALKER.
PAUL H. HANUS.	CHARLES F. WYMAN.
‡CAROLINE L. EDGERLY.	MARY E. MITCHELL.
GEORGE W. BICKNELL.	SHERMAN R. LANCASTER.
J. HENRY RUSSELL.	CAROLYN P. CHASE.
EDWARD B. MALLEY.	ARTHUR P. STONE.
WILLIAM J. MANDELL.	

‡Resigned, Oct. 16, 1902.

SELECTIONS FROM THE RECORDS OF THE MEETINGS OF
THE SCHOOL COMMITTEE.

JANUARY 10, 1902.

Organization of the Board. Persons elected for three years : — Ward One, Charles H. Thurston ; Ward Two, George W. Bicknell ; Ward Three, Robert Walker ; Ward Four, Sherman R. Lancaster ; Ward Five, Arthur P. Stone. Persons elected for one year : — Ward One, Paul H. Hanus ; Ward Two, J. Henry Russell ; Ward Five, William J. Mandell. William Taggard Piper was elected president of the Board ; Sanford B. Hubbard, secretary ; and Frank T. Evans, Page.

Latin Gymnasium, Petition to Equip It. A petition of members and graduates of the Latin and English high schools to the city council, containing five hundred sixty-four names, asking that the gymnasium in the Latin school be equipped with apparatus for the use of the pupils of these schools was received and referred to the committee on high schools.

Appropriations. Transportation of Pupils — Evening Schools — Accommodations for Allston School. Communications from the city clerk were received announcing the appropriation of \$300 for the transportation of pupils from Concord avenue and vicinity to the Russell school, an appropriation of \$500 for furnishings for the Roberts schoolhouse for evening classes, and an appropriation of \$1,000 to provide furniture and fit accommodations for the pupils of the Allston school.

Assistant Teacher of Music. The recommendation of the committee on special studies, that an assistant teacher of music be appointed, which was laid on the table February 21, 1901, was taken from the table and adopted.

FEBRUARY 20, 1902.

Removal of Snow. Communication from His Honor the Mayor. The following was received and placed on file : —

OFFICE OF THE MAYOR,
CAMBRIDGE, January 29, 1902.MR. SANFORD B. HUBBARD,
Secretary School Committee.

DEAR SIR,— Replying to your communication of January 24th inst., containing a copy of a vote of the school committee in relation to the re-

moval of snow from the sidewalks in the vicinity of schoolhouses, I do not think it is expedient to change the existing conditions at this time.

Respectfully,

(Signed)

JOHN H. H. McNAMEE,
Mayor.

Gymnasium. Report of High School Committee. The following recommendation was adopted:—The committee on high schools, to which a petition from members and graduates of the high schools to the city council requesting that the gymnasium at the Latin school be equipped with suitable apparatus, which petition was referred by the city council to the school committee, and by the school committee was referred to this committee, reports, recommending that the city council be requested to appropriate the sum of \$700 for the purpose of equipping this gymnasium.

Adjustable Furniture. The following was adopted:—The committee on schoolhouses recommends that the city council be requested to appropriate \$3,500 for the purchase of adjustable furniture to replace that which, for any reason, is unsuitable for use in the several schools.

Committee of Conference on Schoolhouse Accommodations. The following recommendation was adopted:—The committee on schoolhouses recommends that the city council be requested to appoint a committee to consider, with the committee on schoolhouses of the school committee, the rebuilding of the Allston schoolhouse, the building of a new schoolhouse in Ward Four, and to arrange for the accommodation of the children who are to enter the primary schools March 1, in districts where the schoolhouses are crowded.

Assistant Teacher of Music — Order Reconsidered. The vote of January 20, adopting the recommendation of the committee on special studies, that an assistant teacher of music be appointed, was reconsidered and the recommendation was laid on the table.

MARCH 20, 1902.

Assistant Teacher of Music to be Appointed. On the reconsideration moved at the meeting in February of the recommendation of the committee on special studies, that an assistant to the director of music be appointed at a salary not exceeding \$800, the recommendation of the committee was adopted.

Willow Street Schoolhouse. The following was adopted:—The committee on schoolhouses recommends that the following communication be sent to the city council:—In view of the crowded condition of all the schools in Ward Two, and of the distance which many of the pupils of

the Allston school are compelled to walk to the building now occupied by them, the school committee urgently requests that the building of the proposed schoolhouse on Willow street be hastened as much as possible, and that arrangements be made at once to locate and build a modern schoolhouse to accommodate the pupils who belong in the Allston school.

Crowded Condition at the Wellington Schoolhouse. The following was adopted: —The committee on schoolhouses recommends that the following communication be sent to the city council: — Resolved, that in the opinion of the school committee, the crowded conditions at the Wellington schoolhouse are neither sanitary, healthful, nor economical. The city council is therefore requested to furnish accommodations for the pupils of this school who are now working in the basement, corridors, offices, small rooms, halls, and voting booth, where there is neither proper light nor ventilation. If such accommodations are not provided for the pupils now in the room in the basement, on or before the commencement of the next school term, April 7th, this committee will deem it their duty to close said basement room.

Appropriation for Transferring Pupils. The following communication was received and placed on file: —

In Common Council, April 8, 1902.

Ordered, that the sum of two hundred dollars (\$200.00) is hereby appropriated for the purpose of transferring pupils of the Wellington school to and from said school to other schools. Said sum to be transferred from the appropriation for contingent fund.

(Signed) EDWARD J. BRANDON,
City Clerk.

Appropriation for Graduation Exercises. Voted, that a sum not exceeding \$125 may be expended for the graduation exercises of the high schools, to be charged to the appropriation for incidental expenses.

MAY 15, 1902.

Resignation of Page of the School Board. The resignation of Frank T. Evans as page of the school board was accepted, and William E. McAnaul was elected in his place and his salary was fixed at the rate of \$25 per year.

Harvard University. Tuition of Students at the Rindge Manual Training School. Ordered, that the question of the amount of tuition to be paid by Harvard University for the instruction of students at the Rindge manual training school be referred to the committee on high schools and the committee on finance acting jointly with full power.

Eleven Wards.—Change of Rules. Ordered, that the committee on rules be requested to consider and report as to what changes should be made in the rules of the school committee in consequence of the new division of the city into eleven wards.

JUNE 19, 1902.

Tuition of Pupils of the Lawrence Scientific School. The following was adopted:—The joint committee on high schools and finance, to which the question of tuition of students of the Lawrence Scientific School who take courses in the Rindge manual training school, was referred at the meeting of May 15, reports, recommending that the tuition of these students be fixed at \$32 per course for each student.

Salaries of Teachers in Evening Schools. The following was adopted:—The committee on evening schools reports, recommending that in the future the salaries of teachers in the evening schools be fixed as follows, per evening:—Principal of the mechanical drawing school, \$4.00; teachers in the drawing schools, \$3.00. Principal of the evening high school, \$4.00; teachers in the evening high school, \$2.00. Principals of the elementary schools, \$3.00; teachers in the elementary schools, \$1.50.

Eleven Wards.—Change of Rules. The following was adopted:—In accordance with the request of the Board at the meeting of May 15, the committee on rules recommends that the rules be amended as follows:—By striking out the words “one from each ward” in the seventh line of Section 2, and by striking out the whole of the paragraph relating to “ward committees” in the same section.

That the following be substituted for Section 29:—Members of the Board shall be appointed, who shall have charge of the schools which are not under the direction of a standing committee, and they shall have oversight of their respective schools and may make temporary arrangements in cases not provided for in the rules.

Also that Section 30 be amended by striking out the words “except the ward committees.”

Prevalence of Smallpox. His Honor Mayor McNamee was present and addressed the Board in regard to the alarming prevalence of smallpox. It was voted, that the present term close with the morning session of Friday, June 20, in view of the spread of this disease.

Text-Book in English Grammar. Voted, that the superintendent be requested to consider the advisability of substituting a different text-book in English grammar for the one now in use.

Pension for Teachers. Voted that a committee be appointed to inquire into the advisability of providing some method by which teachers, having reached a certain age and having been connected with the Cam-

bridge schools for a certain number of years, shall be retired with pension.

SEPTEMBER 18, 1902.

Communication Relating to the Election of School Committee. The following communication was received and placed on file:—

IN BOARD OF ALDERMEN, June 10, 1902.

Resolved, that Section 1 of Chapter 357 of the Legislative Acts of this Commonwealth, of the year 1902, entitled "An act relative to the election of the school committee and the removal of certain officials in the city of Cambridge" approved April 29, 1902, is hereby accepted by the city council of the city of Cambridge.

(Signed) EDWARD J. BRANDON,
City Clerk.

Salary of a Teacher Absent at the Beginning of the School Year. The following was adopted:—The committee on finance recommends that Section 69 of the rules be amended by adding the following:—When a teacher is absent at the beginning of the school year, no part of the salary shall be paid until the absentee has returned to school, unless upon the written recommendation of the committee on finance, the Board, by a two-thirds vote, shall so order.

New Schoolhouse on Elm Street. The following was adopted:—The committee on schoolhouses recommends that, in view of the urgent need of school accommodations in Wards Three, Four and Five, the city council be requested to provide at once for building a schoolhouse, containing sixteen rooms and a hall, on the land on Elm street recently purchased for the site of a schoolhouse.

OCTOBER 16, 1902.

Gift from Dr. Morrill Wyman. The following offered by the superintendent was referred to the committee on text-books:—Through His Honor the Mayor, Dr. Morrill Wyman offers to present to each pupil of the Rindge manual training school a copy of "Animal Mechanics," by Sir Charles Bell and Dr. Jeffries Wyman, if the gift meets the approval of the school committee.

At the meeting of the Board in December the gift was gratefully received.

Gift from Mr. William A. Munroe. The following was placed on file:—The committee on high schools reports that William A. Munroe has presented to the Latin school the busts and maps named below:—Busts: (1)

Jupiter of Otricoli, original in the Vatican. (2) Juno Ludovisi, original in the Villa Ludovisi, Rome. (3) Augustus Cæsar, from statue in the Vatican. (4) Virgil. (5) Venus of Melos, from statue in the Louvre. Three of Keipert's maps: (1) Italia Antiqua. (2) Latii Veteris et Finitimarum Regionum. (3) Imperii Romani.

Ordered, that the school committee accept the gift of William A. Munroe, Esq., to the Latin school, and tender to him the thanks of this Board and its appreciation of the valuable aid to the study of the ancient classics his present as well as his former generosity affords.

Physical Training in the High Schools. The following was laid on the table until the next meeting:—The committee on high schools reports, recommending that physical training be introduced as a subject in the course of study to be taught in the Latin and English high schools. Instruction in this subject shall be begun at once for the girls, and for boys as soon as practicable.

At the meeting in November consideration of this report was postponed for one month, and no further action was taken during the year.

Schools Not Closed for the Teachers' Association. The following was refused adoption:—Ordered, that the sessions of the schools be suspended during Friday, October 31, 1902, to enable the teachers to attend the sessions of the Middlesex County Teachers' Association.

Resignation of a Member of the School Committee. The resignation of Mrs. Caroline L. Edgerly, a member of the school committee from Ward Two, to take effect at once, was accepted; and the secretary was directed to inform the board of aldermen of the vacancy in this Board caused by this resignation.

NOVEMBER 20, 1902.

Requirements for Position of Teacher in a Kindergarten. The following recommendation was adopted:—Ordered, that the requirements for the position of teacher in a kindergarten as given in Section 65 of the rules of the school committee be changed to read as follows:—A person to be eligible to the position of teacher in a kindergarten must have had a course in a high school, a course in a kindergarten normal school, a year's experience in teaching, either in a kindergarten or a primary school, and must be able to play the piano.

Head Janitor. The following was laid on the table until the next meeting:—The committee on schoolhouses recommends that His Honor the Mayor be requested to appoint a suitable person as head janitor, who shall have charge and supervise the work of janitors of schoolhouses.

Dunster Schoolhouse. The proposition in regard to vacating the Dunster schoolhouse was referred to the committee on schoolhouses with

the request that it be reported upon at the next meeting of the Board. At the meeting in December the proposition was referred to the committee of 1903.

DECEMBER 12, 1902.

Communication from the Total Abstinence Society. A communication from the secretary of the Massachusetts Total Abstinence Society requesting permission for their representatives to address pupils in their schoolrooms, was referred to the committee on rules.

Plans for a New Schoolhouse. The following was received and placed on file:—

BOARD OF ALDERMEN, Oct. 28, 1902.

Ordered, that the sum of five hundred dollars (\$500.00) be and is hereby appropriated for the purpose of obtaining plans of a new schoolhouse to be erected on the city land on Elm street, said building to cost a sum not exceeding \$80,000.00, including heating, ventilation, and grading, and exclusive of furnishings. The superintendent of public buildings is hereby authorized to procure such plans by competition between architects. The award to be made by a commission to consist of the Mayor, superintendent of public buildings, and the superintendent of schools. The foregoing expense to be charged to the proper appropriation.

(Signed) EDWARD J. BRANDON,
City Clerk.

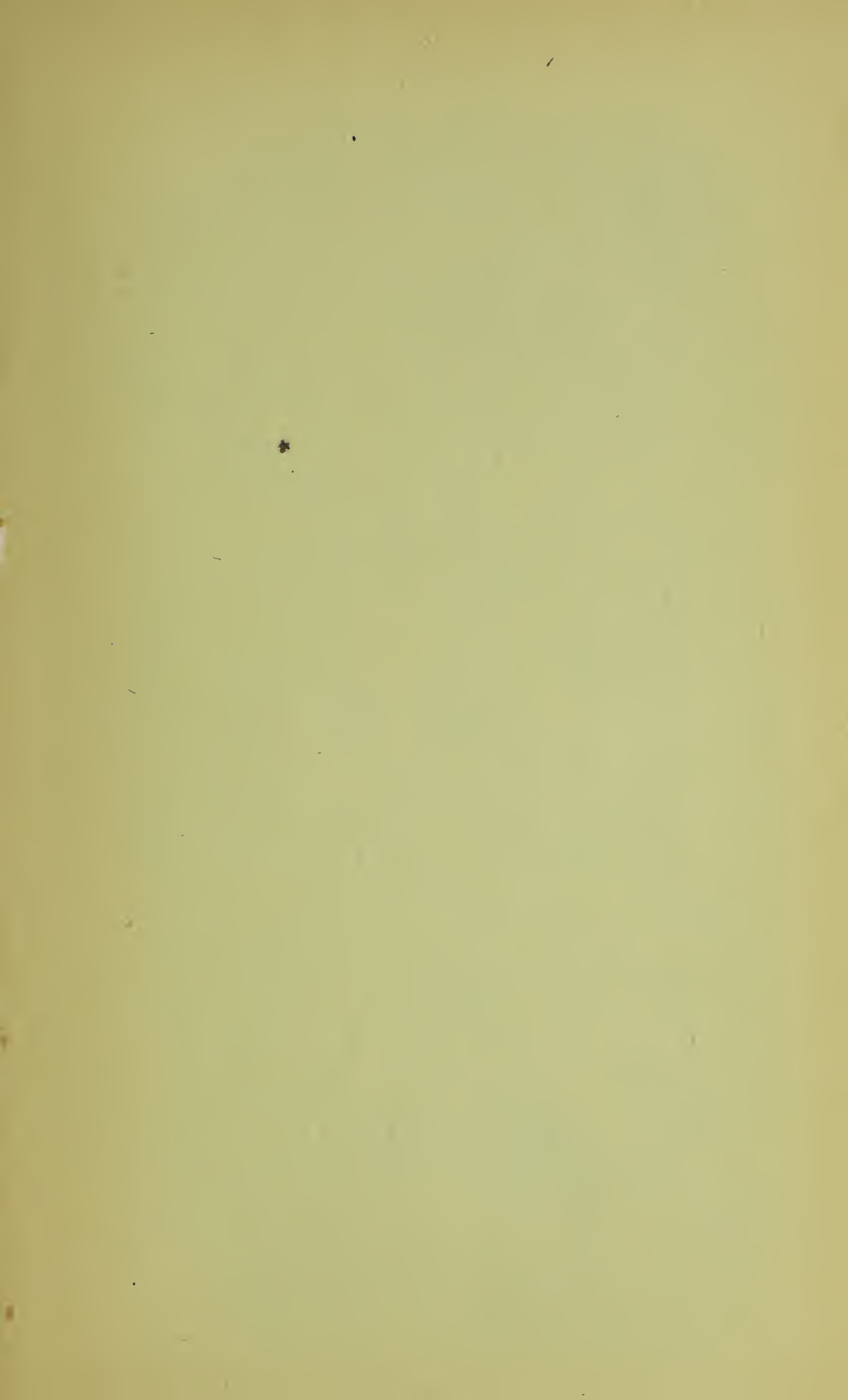
Head Janitor. The report of the committee on schoolhouses that His Honor the Mayor be requested to appoint a suitable person as head janitor was adopted.

Education of the Blind. The petition of G. G. O'Dwyer asking the privilege to lecture on education of the blind, before the high schools, was referred to the superintendent with power.

Afternoon Kindergartens. Voted, that the committee on kindergartens have authority to open one or more kindergarten rooms for afternoon sessions.

Superintendent to Prepare Annual Report. Ordered, that the superintendent of schools be requested to prepare and present to the Board for its consideration the annual school report; and that he be authorized to select and print in that report such portions of the reports now read as may in his judgment be of public interest. Also to make selections from any further reports of committees that may be made later.

Vote of Thanks to the Mayor and to the President of the Board. The following was adopted by a unanimous rising vote: — Voted, that the thanks of this Board be hereby tendered to His Honor Mayor McNamee, and to the president of the Board, Mr. William Taggard Piper, for the marked ability and courtesy manifested by them during the past year in the performance of the duties of their respective offices in connection with this Board.



UNIVERSITY OF ILLINOIS-URBANA

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Annual report of the School Committee an



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